University of Illinois Library
Chicago Undergraduate Division
Navy Pier 12.58
11 Chicago, Ill. 30306

COMMERCE

JUNE 1958 35c

Published since 1904 by the Chicago Association of Commerce and Industry

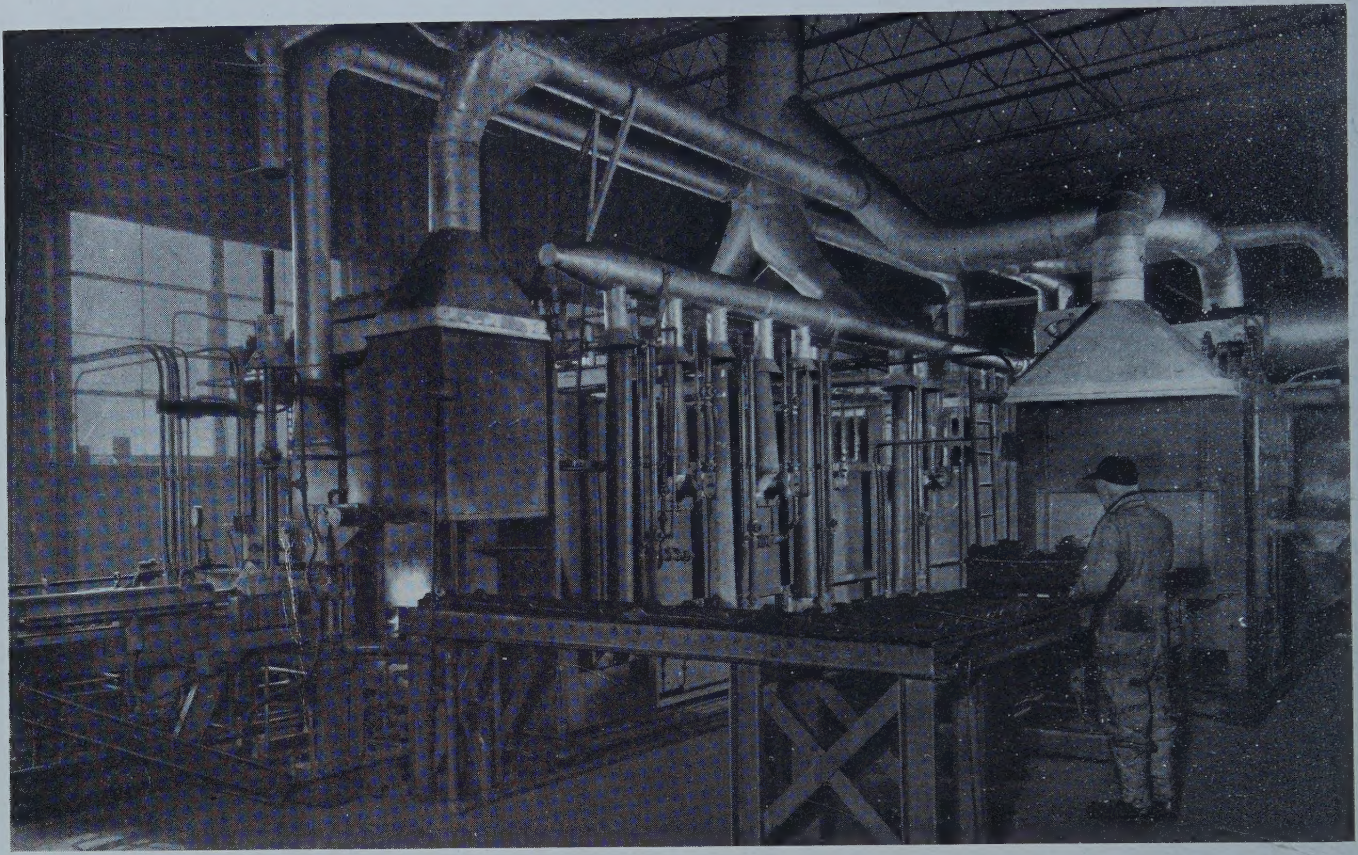
UNIVERSITY OF ILLINOIS LIBRARY JUN 20 1958 CHICAGO

Operation Opportunity — See Page 5

Our Missile Program: A progress briefing

Industrial Packaging Acquires New Dimensions

GAS AT WORK for Chicago's Industry



This latest in conveyor-type Gas furnaces at Modern Steel is completely automatic. After the controls are set, the entire heat treating operation takes place at the push of a button.

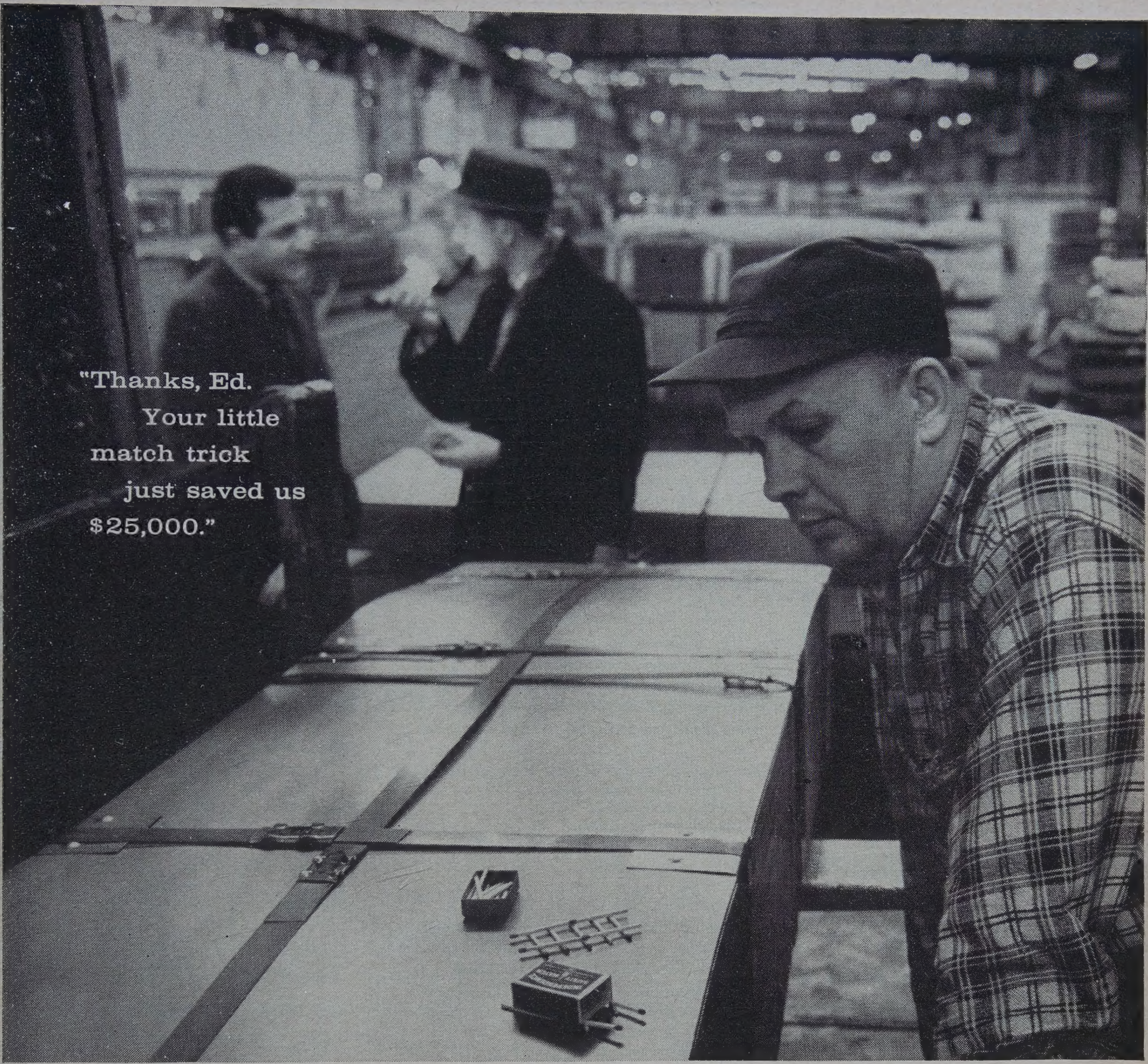
Modern Steel Treating Company, Inc., 1010 West 122nd Street, Chicago, is equipped to do large volume heat treating. Its many furnaces provide facilities for a variety of heat treating processes for products ranging from small parts to single pieces weighing many tons.

Modern Steel Treating chose Gas as the fuel to use. They found by experience, as have other Chicago industries, that the rapid heating qualities of Gas, its controllability and low cost make it the preferred fuel for heat treating.

For information on how Gas can serve you in your production operations, call WAbash 2-6000, Extension 2449. One of our industrial engineers will be glad to discuss Gas fuel and its economies as they apply to your plant.

INDUSTRIAL DEPARTMENT

THE
PEOPLES GAS
LIGHT AND COKE COMPANY



Changing to a seemingly more efficient method may not always add up to the best answer. For example, new packaging instructions solved a handling problem for a large user of cold rolled sheets, but created a new problem by adding about $3 per ton to their steel cost.

Their lifts of steel had been coming in on crosswise skids, and when the fork-truck picked them up the ends sagged. This made handling difficult and hazardous. To overcome this problem they decided to have their sheets packaged on solid platforms which would provide support. This solved the handling problem, but the added cost bothered Ed Robinson–one of Inland's packaging and loading specialists.

Visiting the user's plant, Ed watched the unloading operation and came up with another idea, which he demonstrated with matches: "Why not order your sheets packaged on lengthwise skids?" he asked. "Inland's shipping department will place wood blocks on the truck bed before loading your steel. Then your fork lift truck can get under the lifts easily–and you won't have to pay extra for special platforms."

Some people might call Ed's concern a bit out of the ordinary. At Inland we think of it as normal follow-through. Whether it's help in specifying the right kind of steel for the job, advising on production procedures or aiding with material handling, Inland's sales and field representatives are constantly working to provide their customers with a complete steel service.

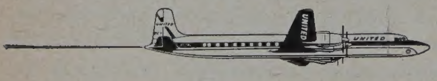
INLAND STEEL COMPANY

30 West Monroe Street · Chicago 3, Illinois | *Sales Offices:* Chicago · Milwaukee · St. Paul · Davenport · St. Louis · Kansas City · Indianapolis · Detroit · New York

INLAND ®

Other Members of the Inland Family
JOSEPH T. RYERSON & SON, INC.
INLAND STEEL PRODUCTS COMPANY
INLAND STEEL CONTAINER COMPANY—DIVISION
INLAND LIME & STONE COMPANY—DIVISION

How very convenient! United's "Executive" flights for-men-only nonstop to New York now leave at 5 p.m. and 5:30 p.m.



Both of United's famous
"Executive" flights are timed
to suit your convenience.
For reservations on either of these
popular after-business flights
to La Guardia, call United Air Lines
at **FI nancial 6-5700** or an
authorized travel agent.

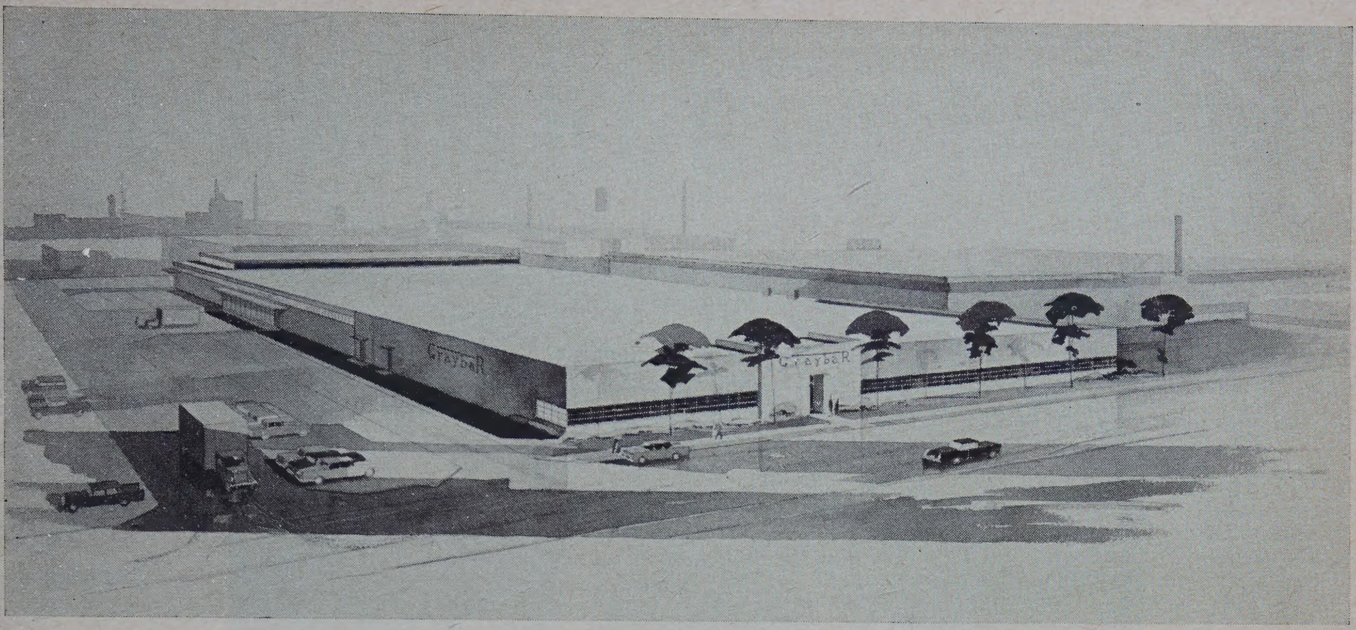
statistics of . . .

Chicago Business

	April, 1958	March, 1958	April, 1957
Building permits, Chicago	2,752	2,239	2,976
Cost	$ 15,170,496	$ 24,894,965	$ 27,548,957
Contracts awarded on building projects, Cook Co. cost (F. W. Dodge Corp.)		$ 57,550,000	$ 107,191,000
Real estate transfers, Cook Co.	4,608	4,123	7,594
Consideration	$ 2,773,920	$ 3,969,914	$ 6,705,848
Bank clearings, Chicago	$ 4,711,202,175	$ 4,718,121,987	$ 4,853,050,848
Bank debits to individual accounts:			
7th Federal Reserve District	$27,015,000,000	$28,619,000,000	$27,957,000,000
Chicago only (Federal Reserve Board)	$13,844,882,000	$15,234,500,000	$14,026,340,000
Bank loans (outstanding) Chicago weekly reporting banks	$ 3,870,000,000	$ 3,824,000,000	$ 4,087,000,000
Midwest Stock Exchange transactions:			
Number of shares traded	2,069,408	1,913,259	2,070,000
Market value of shares traded	$ 71,174,147	$ 64,890,350	$ 72,881,480
L.C.L. merchandise cars, Chicago area	10,727	10,577	15,386
Electric power production, kwh, Comm. Ed. Co.	1,600,971,000	1,716,542,000	1,663,694,000
Industrial gas sales, therms, Chicago	13,686,329	15,114,887	16,407,121
Steel production (net tons), metropolitan area	1,086,400	1,164,800	1,741,500
Revenue passengers carried by Chicago Transit Authority lines:			
Surface division	36,068,788	37,199,926	41,758,175
Rapid transit division	8,931,065	9,024,396	9,716,542
Air passengers, scheduled, Midway and O'Hare airports:			
Arrivals	426,844	409,646	410,000
Departures	433,040	423,101	416,647
Consumers' Price Index (1947-49=100), Chicago	127.0	126.8	122.0
Receipts of salable livestock, Chicago	386,778	368,251	377,622
Unemployment compensation claimants, Cook & DuPage counties	107,744	96,691	36,128
Families on relief rolls:			
Cook County	27,997	28,678	23,393
Other llinois counties	19,319	20,160	14,636

July, 1958, Tax Calendar

Date Due	Tax	Returnable to
1	Renew Chicago business licenses which expired June 30, 1958	City Collector
1	Illinois Domestic and Foreign Corporation Franchise Tax due for 1958 on July 1, 1958; however, the tax is not delinquent until July 31, 1958	Secretary of State
15	Illinois Retailers' Occupation Tax and MROT return return and payment for month of June	Dept. of Rev. (Ill.)
15	Second quarterly payment of Estate Income Tax	District Dir. of Internal Rev.
31	If total Income and Social Security Taxes (FICA) withheld from employe, plus employer's contribution, in June, exceed $100, pay amount to or remittance may be made at end of month, with quarterly return, directly to	Authorized Depositary District Dir. of Internal Rev.
31	Quarterly return and payment (by depositary receipts or remittance) of Income and Social Security Taxes (FICA) withheld by employers for second quarter of 1958 (Form 941). Domestic help (Form 942)	District Dir. of Internal Rev.
31	Illinois Unemployment Compensation contribution and wage report, and payment for second quarter of 1958 (UC-3 and UC-40)	Director, Dept. of Labor
31	Federal Excise Tax return and payment due for second quarter, 1958	District Dir. of Internal Rev.



Rendering of New Plant under Construction for Graybar Electric Co., Inc.

MODERN PLANTS IN MODERN DISTRICTS...

Clearing Industrial District, Inc. always owns neighborhoods rather than individual sites. It gives this industrial location firm the necessary control toward developing a modern industrial district that will stay modern and streamlined. There is never the penalty incurred in picking a site among mixed occupancies.

If you are thinking about a modern site and plant for your company, the four Clearing-operated manufacturing districts in the Chicago area will interest you (two more, the Montrose District, and Addison-Kedzie District have been sold out).

All have "A Clearing Development" stamp on them; this means that they are planned to contain factories which are clean, economical, flexible, with plenty of daylight and fresh air — and consequently attractive.

Each district is planned for growing industries to prosper.

Clearing Industrial District, Inc., has four modern industrial districts in the Chicago area. The company offers the services of a complete engineering and construction department, architect and financing on either a long term lease or purchase contract; in short, every detail toward a completed project.

For further details address inquiries to "Clearing Industrial District, Inc., 38 South Dearborn Street, Chicago," or call RAndolph 6-0135.

CLEARING INDUSTRIAL DISTRICT, Inc.

FIRST NATIONAL BANK BUILDING
CHICAGO 3, ILLINOIS

Their own time:

costliest item in the company pension plan

TIME IS MONEY. B Company's top executive time was Big Money.

Keeping the company's pension dollars properly invested required many executive hours away from company business . . . hours that the business sorely needed.

Concerned, B Company's executives went looking for help . . . and found it at The First National Bank of Chicago.

They discovered that a vast amount of significant financial information comes to a Bank with national connections. They saw how this information can be translated into flexible policies which experienced Trust Officers can adapt to the special needs of each account.

B Company turned over their extracurricular pension plan investments to us for continued top quality supervision. The executive time and talent thus restored to the Company's business pays the annual charges many times over.

If your company's actual operation demands more of your valuable time, why not get in touch with us? Remember —time is money. Why wait to prove it?

The Trust Department

The First National Bank of Chicago

Dearborn, Monroe & Clark Streets • Building with Chicago since 1863

MEMBER F. D. I. C.

COMMERCE

Magazine

Published since 1904 . . . by the Chicago Association of Commerce and Industry • 30 West Monroe St., Chicago 3, Ill. • Franklin 2-7700

June, 1958

Volume 55 Number 5

Contents

Our Missile Program: A Progress Briefing .... By Maj. Gen. B. A. Schriever 13

Industrial Packaging Acquires New Dimensions .... By Phil Hirsch 16

Business Highlights in Pictures 18

The Art of Making Multi-Story Buildings Useable .... By Irving Footlik 20

Regular Features

Statistics of Chicago Business 2

The Editor's Page 7

Here, There and Everywhere 8

Trends in Finance and Business 10

Industrial Developments in the Chicago Area 29

Transportation and Traffic 33

Chicago-Overseas Ship Sailings 36

Stop Me — If 40

Alan Sturdy, Editor

Tom Callahan, Associate Editor

Gordon Rice, Advertising Manager

Published monthly by The Chicago Association of Commerce and Industry, with offices at James and North Cook Streets, Barrington, Ill., and 30 West Monroe Street, Chicago 3, Ill. Subscription rates: domestic $3.50 a year; three years $7.50; foreign $4.50 a year; single copies 35 cents. Reentered as second class matter June 2, 1948, at the Post Office at Barrington, Ill., under the act of March 3, 1879. Copyright 1958 by the Chicago Association of Commerce and Industry. Reprint permission on request. Executive and Editorial Offices: 30 West Monroe St., Chicago, Telephone Franklin 2-7700. Neither Commerce nor The Chicago Association of Commerce and Industry sponsors or is committed to the views expressed by authors. Cover design copyrighted.

OSTMASTERS ATTENTION: Copies returned under labels Form 579 should be sent to 30 West Monroe Street, Chicago 3, Illinois

Our Cover

How is business in Chicago these days and what are the prospects for the balance of the year? With everyone talking "recession," the Commercial Development Division of the Chicago Association of Commerce and Industry decided to find out the facts as they applied to Chicagoland. A questionnaire, called "operation opportunity," was mailed out to the members of the association. It's the results of the first 565 replies received that Paul Kunning, division director (left on our cover), and James C. Worthy, vice president of the division and of Sears, Roebuck and Co., are analyzing.

Here are four questions asked and the tabulation of the 565 replies:

1. *"Our business as of April 30, 1958, compared to the same period a year ago is"* — 56 per cent of the member firms reported that business was about the same or better (31 per cent reporting better); 44 per cent said business was down.

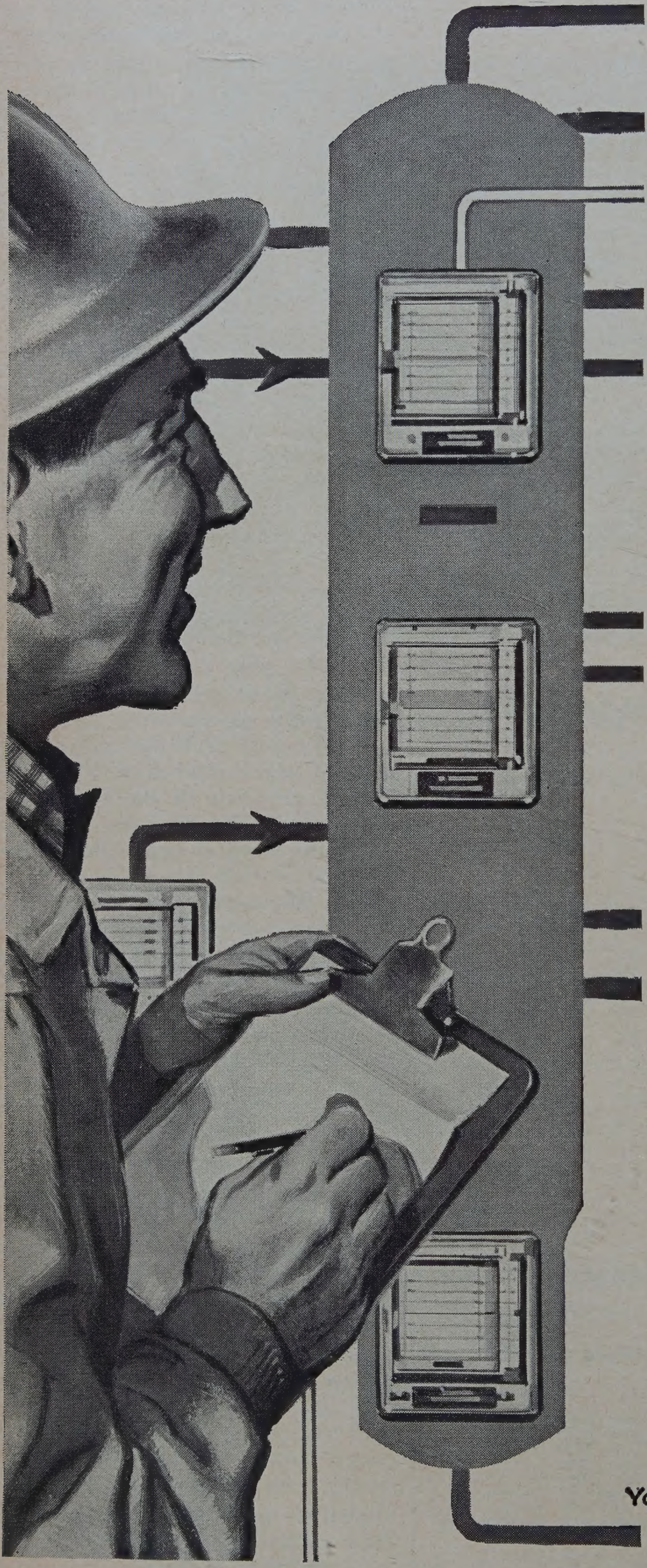
2. *"The number of persons employed by us now compared to a year ago is"* — 67 per cent of the reporting firms said that employment was about the same or better (23 per cent said it was up); 33 per cent said employment was down.

3. *"We anticipate that our 1958 business total compared to 1957 will be* — 62 per cent of the reporting firms expect that business will be about the same or better than last year (38 per cent believed it will be better); 38 per cent said it will be off.

4. *"Our promotional expenditures (including advertising) this calendar year compared to 1957 will be"* — 87 per cent said that promotional expenditures will be the same or up from last year (40 per cent reported that they were up); only 13 per cent reported that they were down.

The survey is revealing in many respects. It indicates, for example, that a considerable number of Chicago firms who have experienced reverses in the first four months of the year expect to make up lost ground over the balance of the year. It reveals, further, that the big majority of firms had kept employment at an average or above average level.

It indicates, also, that a good many firms believe that the corner has been turned insofar as a recession is concerned. It also disclosed that an overwhelming majority of reporting firms are making a determined effort to increase their business.



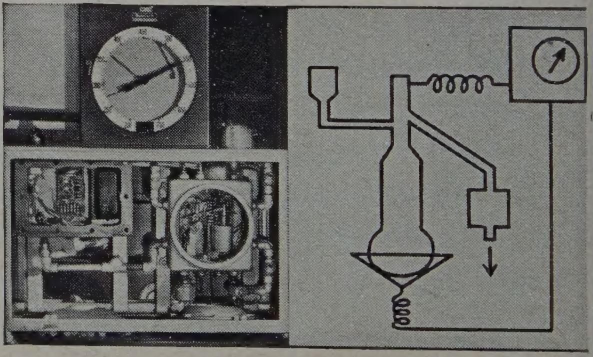
Nothing gets by

Automatic end-point testing device developed by Standard Oil research men makes certain of the uniform quality of gasoline and diesel fuel delivered to you.

Scientists at Standard Oil never stop in their drive to improve and then improve again the uniform quality of the petroleum products that bear the Standard Oil trade-mark. These engineering research scientists have now created wholly new instruments for performing near continuous physical analysis *automatically.*

One such instrument automatically performs the physical analysis that determines end-point. Using it, refineries maintain a continuous inspection of the temperature at which gasoline and diesel fuels are completely distilled. To you, this means that Standard is able to maintain a constant control over the uniformity and high quality of the gasoline and diesel fuels you use. It also means that Standard Oil power-producing petroleum products, with their constantly controlled end-point, burn uniformly, give you uniform high performance.

This is part of the research pay-out, the "something more" research builds into the products you buy from Standard. This is your return from Standard's investment in research. And now there are 48 district offices in the 15 Midwest and Rocky Mountain states to serve you. Call the one nearest you. **Standard Oil Company (Indiana), 910 South Michigan Avenue, Chicago 80, Illinois.**



Automatic end-point tester works this way. A small sample is placed in an electrically heated flask. The temperature is measured and recorded during a heating cycle when distillation is accomplished. Distillate is condensed and drained, the flask temperature is lowered by introduction of the next sample, and the apparatus is ready for another test.

You expect more from STANDARD and get it!

The Editor's Page

Needed — A Program For BMG

The role of businessmen in government (BMG) has periodically been the subject of considerable comment, much of it heatedly partisan and a great deal of it also uninformed. Now, at long last, impartial and authoritative information is available as the result of a three-year survey conducted by the Harvard Business School Club.

The survey presents a rounded picture of the attitudes, motivations, philosophies and performances of 1,500 top business executives in government, divided among those who are now serving, those who have served, and those who declined to serve along with the same data from their counterparts in the career civil service. Also obtained were answers to the need for businessmen, the cause of rapid turnover, and why businessmen were hard to recruit.

Among the other findings, the report says that the businessman in government is neither the "dragon of self-interest nor the angel of duty" of popular notion. More often than not the probe found him to be a "welcome addition to the official family" who serves "despite a frightening lack of interest in the business community for participation in government service."

Surprising as it may seem, the majority of top civil servants surveyed were complimentary of the business man's ability and found him flexible, open-minded, patient, with the ability to get things done and deal diplomatically with Congress. A majority of the civil servants admired their businessman colleague's ability to make and execute decisions.

From their standpoint, 70 per cent of the businessmen in government said that their experience had made them better business executives. Among their principal complaints were loss of pay, red tape, the difficulty of getting decisions finalized, "conflict of interest" regulations, and unrestrained criticism, particularly from legislative bodies. They also observed a lack of on-the-job indoctrination.

The Harvard Business School Club study proves conclusively, however, that business executives can make a substantial contribution to government, that they are welcomed by top public servants, and that government, business and individual businessmen all will gain if the service is expanded.

But like most things, this will not come about without planned action. Even the Eisenhower administration, which has been called the businessman's government, has admittedly had a difficult time recruiting the kind of businessmen it wanted. One of the major problems has been that few companies have felt any responsibility for supplying qualified administrators for government service. Where companies have permitted or encouraged such service on the part of their executives, there has been a reluctance to release them long enough.

On the government side, there have been a number of shortcomings. Among these is the lack of an organized recruiting program, a formula for reasonable interpretation of "conflict of interest" laws and the failure at times of members of Congress to exercise their right of legislative inquiry while at the same time respecting the human dignity and professional attainments of top government administrators.

Here is an area where a joint commission of business and government leaders could develop an organized program to remove the objections of businessmen to government service and at the same time encourage more companies to let their executives render special government service. Certainly as government becomes bigger and faces ever more complex problems, its need for business trained administrative talent will inevitably increase. Procurement and utilization of that talent should no longer be a hit or miss operation.

Health Care for Senior Citizens

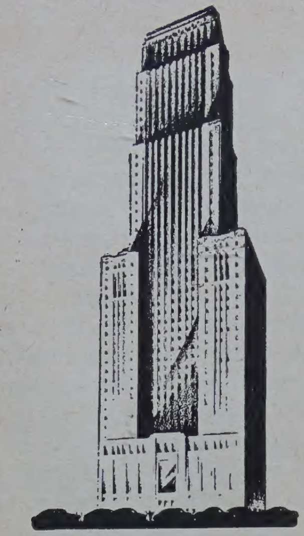
One of our newest organizations is called the "Joint Council to Improve the Health Care of the Aged" — and it is an organization with an enormous achievement potential.

The members are the American Dental Association, American Hospital Association, American Medical Association, and the American Nursing Home Association. The council has three broad objectives — to identify and analyze the health needs of the aged; to appraise available health resources for the aging, and to develop programs to foster the best possible health care for them regardless of economic status.

In order to reach these goals, the council has laid down a detailed and positive program. Research will produce needed information that is not now available, on such matters as the incomes and resources of the aging and the utilization of health services and facilities by the aging. Improvement and expansion of health care facilities for these senior citizens will be encouraged in a number of ways — the establishment of standards for nursing homes, better and broader methods of governmental assistance where needed, and so on. Stress will be laid on the development of community health work, such as organized home care and visiting nurse services. Education, research and action programs concerned with the health problems of the aging will be intensified at all levels — national, state and local. Improved diagnostic and treatment methods will be sought. Another facet of the council's program will be to increase the availability of improved voluntary health insurance coverage for older people.

Our senior population now numbers almost 15 million persons and is steadily growing. The council's program should do much to make life happier and fuller for them all.

Alan Stuedy



One La Salle Street

numbers among its tenants the outstanding insurance companies listed below. These firms selected this distinguished building because of its central location, its imposing architecture, the high character of its occupancy, the excellent standard of service maintained, and the prestige of its address.

Berkshire Life Insurance Co.
Connecticut General Life Insurance Co.
Connecticut Mutual Life Insurance Co.
Guardian Life Insurance Co.
Home Life Insurance Co. of New York
Fred S. James & Co.
Kansas City Life Insurance Co.
Lafayette Life Insurance Co.
Loyal Protective Life Insurance Company
Manhattan Life Ins. Co.
Manufacturers Life Ins. Co.
Massachusetts Indemnity Insurance Co.
Massachusetts Mutual Life Insurance Co.
Mutual Benefit Life Insurance Co.
North American Life Assurance Co.
Northwestern National Life Insurance Co.
Occidental Life Insurance Co. of California
Ohio National Life Insurance Co. of Cincinnati
Penn Mutual Life Insurance Co.
Provident Mutual Life Insurance Co.
Prudential Insurance Company of America
State Mutual Life Assurance Co. of Worcester, Mass.
Sun Life Assurance Co. of Canada

Inquiries are invited regarding space available, adaptability to specific needs, rentals, service features, and other details.

L. J. Sheridan & Co.
Agents
One La Salle St., Chicago - ANdover 3-7457

Here...There... and Everywhere

• ***Summer Management Seminar*** – The 1958 Summer Program of the Management Development Seminar, conducted by the Industrial Relations Center of the University of Chicago, will be held from July 13 to August 2 in Estes Park, Colorado. The Seminar is a three-week, integrated program of advanced education and training for executives at the middle and top management levels. Additional information may be secured from August H. Bonhiver, Director, The University of Chicago, 315 S. Plymouth Court, Chicago 4, Illinois.

• ***New Course for Journalists***–The City News Bureau of Chicago and Northwestern University's Medill school of journalism will join forces to offer a new kind of journalism class featuring a professional internship program beginning next fall. Sixteen students selected for the course will spend three days a week working as reporters for the City News Bureau with pay. The remainder of their schedule will be classroom work.

• ***Cash Dividends Up***–Cash dividends paid by companies listed on the New York Stock Exchange were the highest for any first quarter in history. The total was $2,179,860,580, an increase of more than $43 million over the first quartetr of last year. It was the 16th successive time that first quarter dividends have increased from the first three months of the previous year.

• ***Form New Companies*** – Trolex Corporation, Hillside, Illinois; to make electronic devices such as wafer switches for use in television, radio, and laboratory instruments; and control switching devices for electric ranges and air conditioning equipment.

Curran, Bayliss and Glasgow, Inc., Chicago, Illinois; devoted to management consulting services in the area of data processing methods and procedures.

Management and Business Automation, a magazine by the publishers of Office Appliances Magazine, Chicago, Illinois; to report on new ideas, developments, applications, results, and the human impact of office automation in all areas of commerce, industry and government. Preview edition scheduled for October, 1958.

• ***Explain Nuclear Insurance Plans*** – A full description of the nuclear hazard insurance now being offered American industry against the perils of atomic reaction, radiation and radioactive contamination has been published by Alexander & Alexander, Inc., insurance brokers and consultants. Free copies of the report are available by mail from the firm's office, 225 Broadway, New York, N. Y., or from its branch offices.

• ***Planes by the Pound*** – The complexity of high-performance aircraft is reflected in cost per pound. Republic Aviation reports that a World War II aircraft cost about $10 a pound, by the time of the Korean war it had risen to $25, and today's supersonic planes like the F-105 fighter-bomber average about $50 a pound. Jets like the Thunderchief require 25 times as many engineering hours as World War II planes did.

• ***Aerosol Paints Zoom***–The American Can Company reports that the paint industry is in the midst of a 50-million-can year for aerosol packaged paints. In comparison, last year's estimated production of aerosols for paint was 35 million cans; in 1956 about 22.5 million were produced.

• ***They've Introduced*** – a new leasing plan for complete installations

(Continued on page 27)

"P-E-R-F-E-C-T!"

"P-E-R-F-E-C-T!"

. . . that's what
THOUSANDS and THOUSANDS
of SATISFIED CUSTOMERS
have been saying
for YEARS and YEARS
about BILLIONS
of

CONTINENTAL ENVELOPES

(. . . and you know that thousands of satisfied customers can't be wrong!)

"Direct from Factory to You—"
Years of experience . . . skilled craftsmen . . . and new production techniques mean greater SAVINGS FOR YOU. Whatever your envelope requirement—look to Continental for A BETTER JOB at a BETTER PRICE!

• Commercial • Window • Postage Saver • Open End • Coin • Metal Clasp • String Tie • Air Mail • Baronial • Booklet • Blank-O-Lope . . . and Custom Made envelopes for IBM and other data processing equipment — Industrial Applications — Creative Advertising—Direct Mail.

Won't you join our list of satisfied customers?

Let us quote on your next job! For superior quality, super service and amazingly low prices . . .

Continental Envelope Corp.
2929 S. Wabash Ave. • Chicago 16, Ill.
— Designers, Manufacturers & Printers —

Call **DAnube 6-6181**

FOR SALE

The Elgin, Joliet and Eastern Railway has for sale many choice tracts of land especially suited for your industrial use.

- ★ Located on the Chicago Outer Belt — excellent rail facilities.
- ★ Immediate possession.
- ★ All Chicagoland advantages without central area congestion.
- ★ Adjacent to best labor markets.
- ★ Room for expansion.
- ★ Better tax climate, lower land costs and many other important advantages.

The 'J' serves the following communities: In Illinois—Waukegan, North Chicago, Lake Zurich, Barrington, West Chicago, Plainfield, Aurora, Joliet, Frankfort, Matteson, Chicago Heights and South Chicago. In Indiana—Dyer, Griffith, Hobart, Porter, Gary, Hammond, East Chicago and Whiting.

YOUR INQUIRY will be held in strict confidence and will receive prompt and courteous Attention!

W. E. DEATON, Ass't. to Pres.
208 South LaSalle Street
Chicago 4, Illinois
CEntral 6-9600

F. V. FISHER, Land & Tax Agt.
Box 907 - Joliet, Illinois
Joliet 6-5321

CHICAGO
E. J. & E. RY.
OUTER BELT

Trends . . . in Finance and Business

• ***Inventory Problems of Business*** — Inventories tie up nearly 30 per cent of the working capital of the average U. S. business, but how to manage them is still an unsolved problem for many companies, the National Industrial Conference Board found in a study which took several years to complete. From replies of the more than 100 firms which cooperated in this report, the NICB finds that: despite apparent progress, management in general is dissatisfied with its control over inventories; there is a lack of guiding principles upon which executives can base their day-to-day inventory decisions; and only a relatively few companies view inventories in a positive light and seek increased profits from inventory management rather than the mere avoidance of losses.

Three major factors cause inventories to be a problem. First, they represent a heavy investment burden. The value of trade and industry inventories during 1957 amounted to over $90 billion. Secondly, the companies studied report that changes in total inventories and in production tend to lag behind changes in sales activity. Finally, failure to provide an inventory control program that looks beyond current sales demands can result in a whole year's profits being wiped out in a single adjustment period.

According to cooperating companies, inventory imbalances stem from many causes. Among those most frequently mentioned are: lack of a controlling policy or program which sometimes results in an "every man for himself" approach; failure to delegate management responsibility with the result that clerks who keep the stock records often make the decisions for management; failure to recognize that inventory is a country-wide problem requiring coordination between sales, finances and production; inability to forecast accurately the amount and timing of future demand for various products in the line; an indication to hoard inventory among purchasing, production and sales personnel, all of whom can make their job easier and apparently more efficient by retaining a large inventory; the need to accumulate inventories in advance of the selling season; and failure to develop good sources of supply, which forces many companies to build larger-than-desired inventories as insurance against the interruption of production and possible loss of sales.

• ***Mileage Payments at All-time High*** — Mileage payments to salesmen driving their own cars on company business have reached an all-time national high of 8.84 cents per mile. This represents a jump of 12½ per cent from a year ago when the national average was 7.72 cents per mile, according to Michael Braude, president of Emkay, Inc., national auto fleet leasing firm, which conducted an independent survey on fleet costs. The survey disclosed that payments ranged from a low of 6.5 cents per mile to a high of 11 cents per mile.

The survey covered companies with national sales forces operating in all sections of the country. Regional differences in payments caused by special local conditions are included in the national average. The survey covered payments by more than 100 companies with fleets ranging in size from 50 to 500 cars. Almost 10,000 cars were covered by the survey. Most popular mileage rate was eight cents per mile, paid to 42 per cent of the salesmen covered. Sixteen per cent of the total are paid

(Continued on page 27)

Do you want a BETTER MORTGAGE?

THEN CALL—

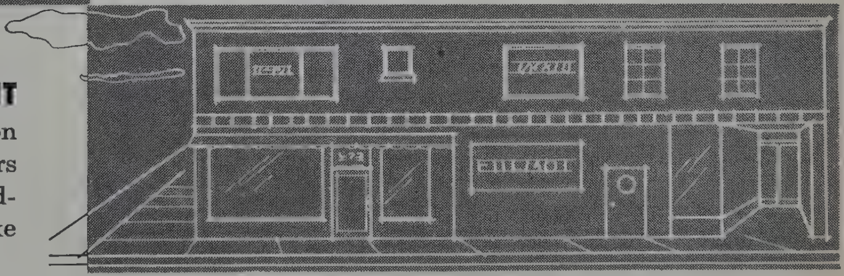
As direct insurance company mortgage loan correspondents, we have a ready supply of funds for good first mortgages on apartment and commercial buildings.

WITHOUT COST TO YOU

we will inspect your building for mortgage loan quotation. Within 48 hours after you call, we will advise you as to the maximum loan available and terms under which it can be made. There is no obligation.

IF YOU CONTEMPLATE A SALE OR PURCHASE

of a building, it is to your advantage to obtain the best mortgage available. Let us help you make the sale or purchase.



OBTAIN CASH FOR NEW INVESTMENT

by refinancing your present property on a long term basis. Economic forecasters predict that the price of apartment buildings will continue to rise. Why not take advantage of the present offerings?

Just a telephone call can bring you a better mortgage. You can be sure of the same helpful service we give our hundreds of other satisfied customers.

Whatever Your Mortgage Problem . . . Let Us Help You.

CALL FOR A FREE MORTGAGE LOAN QUOTATION.

A. H. GRUETZMACHER & CO.

39 South LaSalle Street • Chicago 3, Illinois • Financial 6-4137

Member: Mortgage Bankers Association of America

Recovery of a missile cone from the ocean after a flight into outer space

Photo through courtesy of Cook Electric Company

Our Missile Program: A Progress Briefing

By

MAJOR GENERAL B. A. SCHRIEVER

Here's a revealing report on the unprecedented advances the U. S. has made in science and technology in the last year

EVERYONE has heard, at one time or other, the referrals to missiles as ultimate weapons. Even though we are in the missile business, we are the first to point out that there has never been an ultimate weapon in the sense of military hardware. Moreover, no military weapon can alone guarantee our national security. That national security depends, in our times, upon public understanding and support of what may be called "the five fundamentals of survival."

Here are the five fundamentals:

1. Achievement of U. S. leadership in space technology.
2. Public realization that the cold war is conducted along political, economic, scientific, psychological, as well as along military fronts.
3. Constant coordination of national efforts, both civilian and military, to draw wisely upon our human and material resources to cope successfully with the Communist challenge.
4. Positive public action to meet the growing need for education, humanistic as well as scientific.
5. Application of the "All together and all at once" weapon system approach to coming space age developments to provide the highest yield in national defense.

Unprecedented Advances

The past 12 months have been marked by unprecedented advances in science and technology, both at home and abroad. During this past year the American public has been made keenly aware of Soviet ballistic missile flights, our own ballistic missile flights, Sputniks, Explorers and the Vanguard.

Taken together, these have fostered a new climate of concern with outer space vehicles and travel. The Air Force, through the research and development efforts of the Ballistic Missile Division, is helping to open up new frontiers in space technology.

Our job involves management supervision of four major weapon systems programs: Our first mission has been the design and production of Thor, Atlas and Titan. We are now also deeply involved in research and development for the Air Force satellite system, for lunar probes and for the Minuteman, ballistic missile.

In moving toward these objectives, we have had successes and setbacks. We have had our share of triumphs and our share of troubles. Here is what has been done in the last year:

1. The flight test aims of the Thor missile are being accomplished in a way that closely follows or beats a schedule laid down 30 months ago. I am glad to be able to announce officially for the first time that an Air Force Thor missile flew, on October 24, 1957, 2,400 nautical miles, or 900 miles in excess of its designed range. Production of the complete Thor weapon system is going forward at an accelerated rate. As a result, plans call for the first Thor squadron, equipped with 15 missiles, to be deployed to operational sites in the United Kingdom before the end of this year — or just 36 months after this project was begun.

2. A strong start has been made toward further extending the missile art by means of a new refinement known as project "Able." "Able" illustrates the way in which existing hardware can be readily modified and adapted to several new space flight purposes. Moreover, Able is a prime example of interservice cooperation in exchanging

---

The author is commander of the Air Force Ballistic Missile Division, Air Research and Development Command, USAF. This article is a digest of his presentation at the "Missile Age Briefing" meeting co-sponsored by the Air Force Association, Illinois Wing; and the Chicago Association of Commerce and Industry.

Official U. S. Air Force Photos

Major General Bernard A. Schriever

ideas and coordinating talent and facilities. For in its first stage, Able uses an Air Force Thor missile as a booster, and in the second stage, it uses a Vanguard engine developed by the Aerojet Company for the Navy. This Air Force engine has been especially modified for the Ballistic Missile Division by the Ramo Woolridge Space Technology Laboratories.

Vital Test Data

Able will provide us with vital high speed re-entry test data required in the design of more advanced nose cones for Thor, Atlas, Titan and Minuteman, and will provide us with completely new information in the field of biomedicine. In the months ahead, as each Project Able missile is tested, it will carry a mouse in the nose cone. We expect the mouse's reactions will tell us a lot about the effect of space flight on living organisms. We will be gradually replacing such mice with more complex animals until, step by step, we have learned enough to make it safe to put man into space early in the 1960s.

Under direction of the Advanced Research Projects Agency, Able will be among the first U. S. moon vehicles through which we can investigate and appraise many new phenomena in space travel. To put such a vehicle in the vicinity of the moon, 240,000 miles away, we need powered flight for only about the first 500 miles. After this, the missile coasts toward the moon. It will coast for two days. At the end of these two days the missile will have slowed down to a mere 500 miles an hour in contrast to its early initial speed of nearly 15,000 miles an hour. These experiments can provide us with information on cosmic rays, atmospheric pressure, gravitational, electronic and magnetic fields previously unattainable. Once you do these things, you open the way to some rather astounding possibilities.

You could, for example, put telescopes into space where lenses would not be blurred in the attempt to see through the earth's dense atmosphere. One authority in studies of the sun has said that it would be possible to get an entirely new type of space spectograph which could enable us to acquire new knowledge about heavy element thermonuclear reactions in the sun — and that this knowledge could result in some remarkable forward strides in both the military and civilian uses of thermonuclear power.

3. Our planned short-range Atlas flights, up to a distance of some 600 miles, have ben conducted regularly at Cape Canaveral, Florida, where full-range flights up to 5,500 miles will begin soon, all of them on a progressive timetable laid down more than 40 months ago. From the very outset of our ballistic missile program, we have been meeting our flight test objectives at a gratifying rate. We hope to have operational capability of the Atlas some months before the time thought possible by the distinguished Von Neumann committee of scientists which, back in 1954, first established the feasibility of the ICBM.

4. Our Titan ICBM will be ready for flight testing at the Air Force missile test center in the near future. The Titan was conceived as a backup missile for the Atlas to give us an alternate approach in achieving an ICBM capability. Initiated a year later than the Atlas, the Titan is the beneficiary of the concepts, techniques, and procedures which have contributed so importantly to the success of the Thor and Atlas programs. When it becomes an operational part of our Strategic Air Command, the Titan will be launched from underground sites which incorporated everything we have learned up to now in affording protection against nuclear attack.

5. Our first launch facilities at Cooke Air Force Base in California, including stands, blockhouses, photographic and tracking equipment will be completed by early this summer. Crew training in the launching and logistics of both Thor and Atlas will be well under way at Cooke by late summer of this year. Construction has already begun on a new Pacific missile range which will enable us to fire our missiles out over the Pacific in training flights with the same accuracy as we now do at Cape Canaveral and research and development flight testing out over the Atlantic. Another Air Force ballistic missile base near Cheyenne, Wyoming, will soon be under construction. Two more such bases have been selected — one near Omaha, Neb., and another near Spokane, Wash.

6. The Minuteman solid propellant ICBM program is emerging from the embryo paper proposal phase into full-fledged research and development. Our hope is to push

this program forward as rapidly as the technical state-of-the-art will permit. We expect to have research and development contracts in the hands of selected contractors by the end of this summer.

Today we must recognize that the only thing we can be sure of in the military picture is that technical changes will continue at an ever accelerating rate. Thus the criterion of success for a military service has become the ability to conceive, to develop, and to operate weapon systems which take the fullest advantage of scientific and engineering advances.

State-of-the-Art

This means that the weapon system we set out to design today has to be based on accurate forecasts of what operational requirements are going to be four to ten years from now. With these requirements in mind, we must then design the overall weapon system in such a way as to gain the maximum benefit from anticipated improvements in the performance of the weapon system as a whole, as well as in its individual parts, during, say, the entire four-year period of development. The essence of this approach, in our case, is that there must be projection of the state-of-the-art as it will exist four years in advance of freezing a weapon design, together with action to bring along simultaneously all the elements of our program so that they would be ready, at each successive stage, to be fitted into each other as required.

This has been done in our Air Force Ballistic Missile Program. For example, when we started out four years ago, we did not have a reliable rocket engine. To be sure, we did have some test engines but they were not very good. Based on development experience, we had every reason to believe that, by means of constant experiment and testing, we would be able to come out with a reliable engine. We therefore decided to go ahead and design the entire missile — including airframe and guidance — around what we believed that engine would be four years in the future.

Similarly, back in 1954, the warheads in existence would have required a gigantic missile to deliver them to the target — a vehicle weighing up to as much as a million pounds. However, using the same theory and principles upon which existing warheads had been produced, we were confident that a much smaller and lighter warhead, delivering a sizable megaton yield, could be ready for use on the ICBM at the same time the engine, airframe, and guidance systems would be ready.

The weight and size of this projected warhead became one of the principal design factors. The combination of such projections made possible the design of a missile one-fourth the size than otherwise would have been required had we designed it around engines and warheads available in 1954.

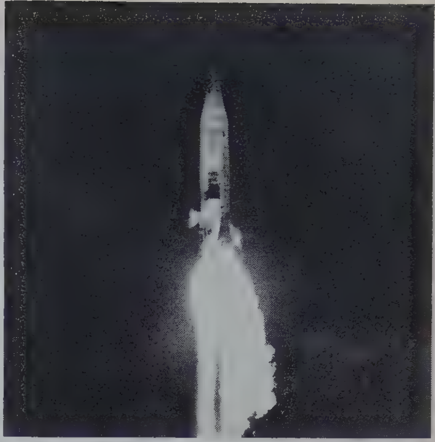
Everyone recognizes the need for projections of this kind — for looking ahead and planning ahead and taking the big jump forward. Timidity is the road to failure. We must continue to move ahead with the courage to take the necessary calculated risks. Otherwise we find ourselves equipped with obsolete weapons systems that invite national disaster.

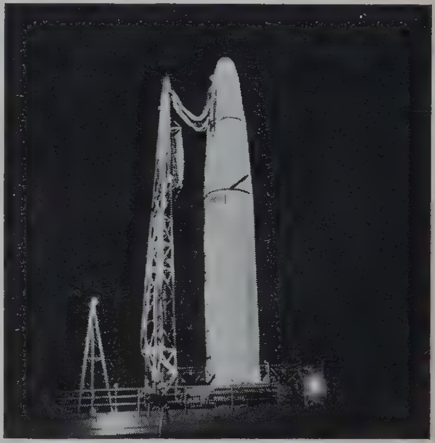
We have a concept of concurrency, which may be best defined as moving ahead with everything and everybody, all together and all at once, so as to provide an operational capability of a weapon system at the earliest possible moment.

Complete System

We can make an analogy here, between the ballistic missile and the automobile: We should understand that the ballistic missile system does not consist only of the missile itself. This would be like regarding the automobile, by itself, as a self sufficient means of transportation. Yet when we think about it for a minute, we see that every car we drive is backed up by a vast, support structure indispensable to automobile operation — a support structure of highway networks, garages for overhaul and repair, filling stations for fuel and servicing, distribution centers for replacement and parts — along with the production base symbolized by Detroit assembly lines.

By the same token, the ballistic missile requires for its operation its own vast support structure — launching pads, gantry cranes, blockhouses, tracking equipment, testing, maintenance and supply facilities, along with its own production base, the industrial plants of America. Within this total operational and support environment, there is no more important task than to recruit and train the personnel to man and maintain our ballistic missile systems.


The Atlas, an intercontinental ballistic missile, in flight


The Thor, an intermediate range ballistic missile, ready for launching

A major result of this concurrency approach has been that we have been able to collapse the schedules and shorten the usual time cycle between starting to build a weapon system and getting it into operation as typified by the Thor. Another major result of this approach is that the trend in the development and production of the ballistic missile is now definitely toward lower cost, greater simplicity, yet higher effectiveness.

All this would have been impossible without our unique science-industry-government team which has resulted from marshaling a cross section of our human and material resources to an extent greater than that required by the Manhattan District Project which produced the first atom bomb. Today this team consists of more than 80,000 people, of

(*Continued on page 30*)

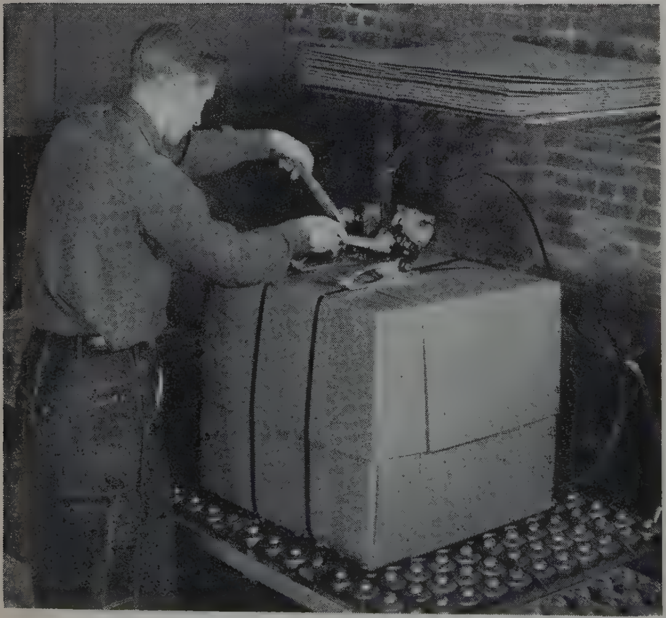
A new way of handling bulk shipment of granular and powdery materials is provided by these 2,500-gallon synthetic rubber and fabric containers. An important feature of the containers is that they can be collapsed after emptying for return and re-use

U. S. Rubber Company Photo

Industrial Packaging Acquires New

New developments in corrugated cut shipping, packing, and storage

By PHIL HIRSCH

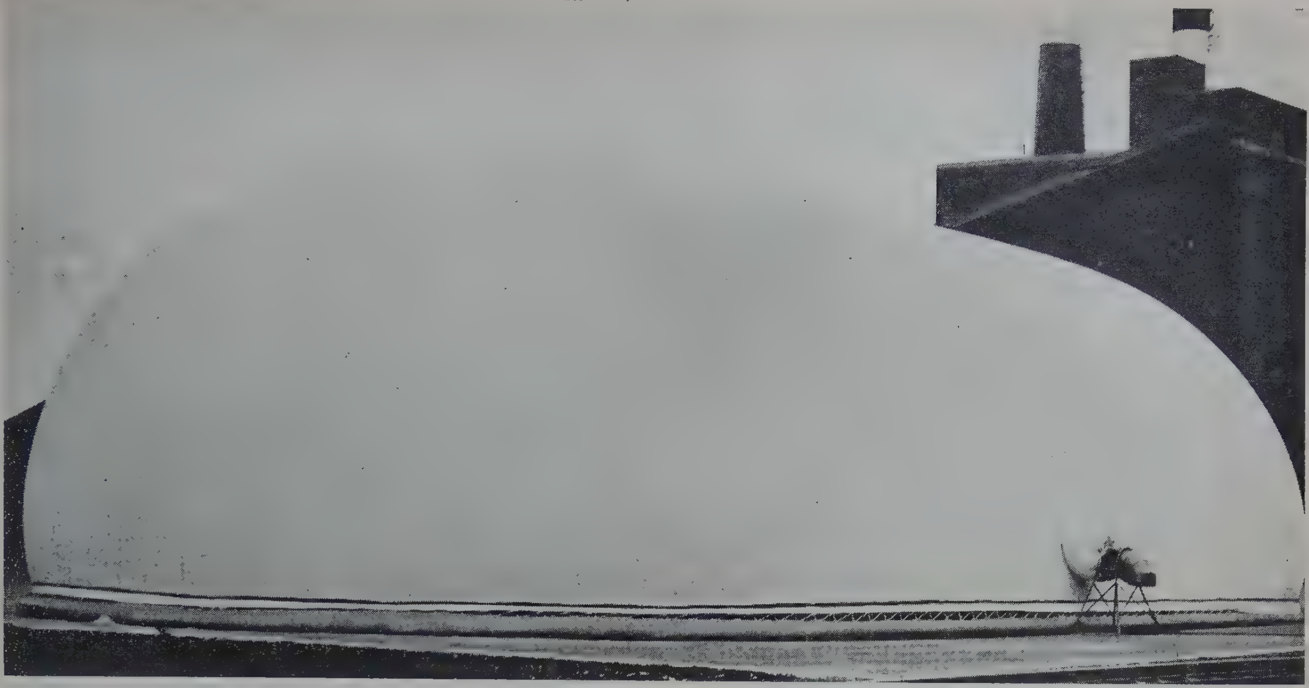


Signode Steel Strapping Company Photo

Steel strapping completes the assembly of the "Adjusta-Pak" which is put together from a number of flat corrugated sheets which have been specially scored and slitted. Big advantage: interior dimensions of the container can be changed easily to fit the dimensions of various-sized products or shipments

CORRUGATED containers that expand and contract to fit products of different sizes, portable plastic warehouses that are held up by air pressure — these are two of several developments which have cut shipping, packing, and storage costs for many companies in the past few years. And it's about time, say a number of industrial packaging engineers.

The engineers contend that despite conveyors, lift trucks, automatic palletloaders, and similar wondrous devices, a lot of firms are still paying an excessive price to move work-in-process through the plant, and to pack, store, and ship the finished product. One critic is

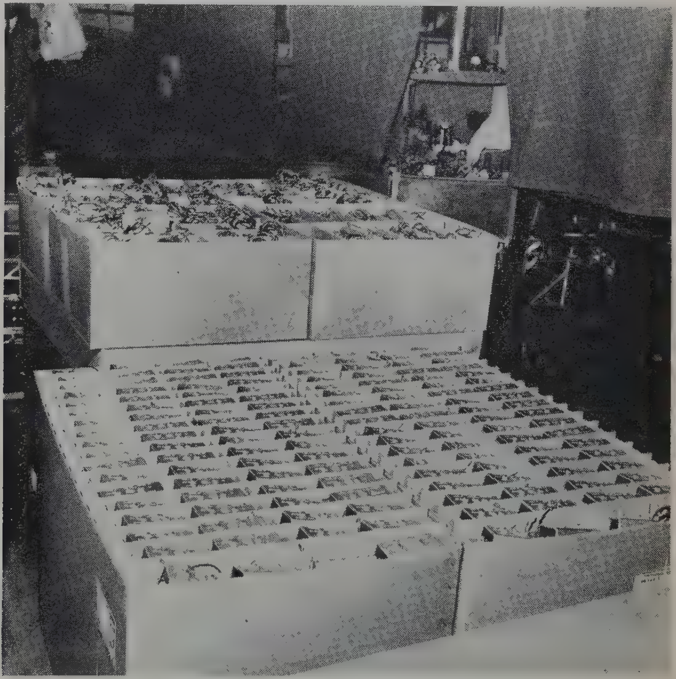


CID Air Structures Company Photo

Designed for a wide variety of temporary storage purposes, this air-supported plastic warehouse is 40 feet by 80 feet and 20 feet high. It can be entered by a fork lift truck. The one above is in use at the Argo, Illinois, Corn Products Company plant

Dimensions

and plastic containers costs for many firms



The container above is saving a manufacturer of home laundry dryers 65 per cent in unpacking time. It involves use of trays tailormade to the dimensions of the product and consolidation of several small shipping containers into one large one. The four small boxes in the rear will be placed above the two large ones (foreground) and after a corrugated cover is put on, all six will be steel-strapped to a wood pallet

J. J. Brown, manager of material handling for General Electric. Last year he told an industrial forum that "material handling is responsible for almost 40 per cent of the labor cost, and 25 per cent of the total cost" of the typical manufactured product. About the same time, Industrial and Engineering Chemistry Magazine commented: "Nowhere in the chemical industry is there a greater potential for production economy than in that phase concerned with packaging, packing, warehousing, and materials handling."

The chemical industry isn't the only one, apparently, where opportunities for improving efficiency and cutting costs are hiding in the shipping room and warehouse. G. Felsenthal & Sons, Inc., a plastics manufacturer on Chicago's Northwest side, has reduced packing costs "several thousand dollars a year," reports production manager Richard Brown, by developing an ingenious corrugated shipping container that doubles as a tote box capable of moving work-in-process down the production line.

Felsenthal is a major manufacturer of plastic components for automotive and aircraft dashboard instruments (speedometers, fuel, pressure, and temperature gauges). Among its products are the transparent "windows" that fit over the front of such instruments, plus the calibrated panels that surround the control knobs and levers. Formerly,

(Continued on page 22)

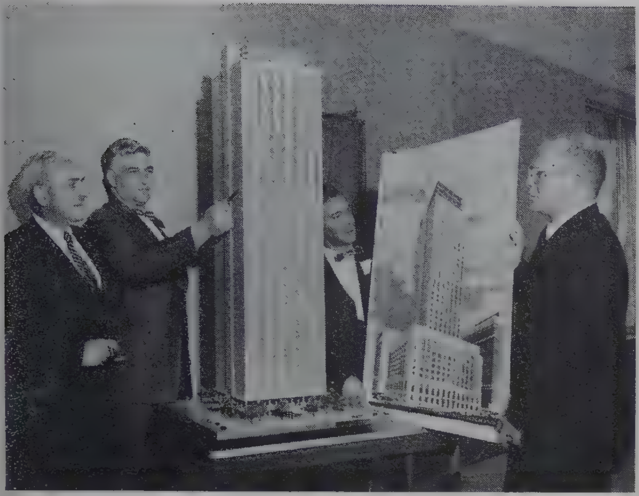
Business

Another improvement for Chicago's port — A new heavy lift crane. It will allow the loading and unloading of heavy equipment in Chicago. Heretofore such shipments had to be handled at other cities. Above, the new crane, owned by the Chicago Regional Port District, test lifts 110 tons at 45 foot radius. The crane went into commercial service on May 14, 1958

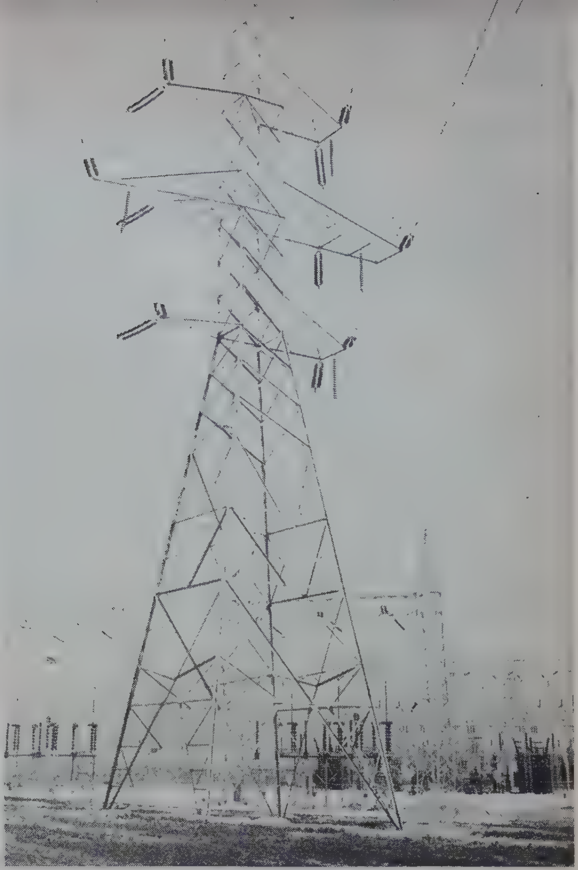
Nurse at New York Polyclinic Hospital prepares to insert steel basket loaded with soiled surgical instruments into the new "Silent Sound" ultrasonic washing machine. The washer is said to cut cleaning time and labor more than 80 per cent below conventional hand-scrubbing methods. It uses the cleaning power of sound waves pitched too high in frequency for human hearing. Acoustica Associates, Inc., manufactures it

First in the West with the jet-power Viscount II, Continental Airlines "christens" its inaugural flight. Wielding the champagne bottle, with the help of some gusty winds, is Mrs. John Duba, wife of John Duba (left) who was the proxy for Mayor Daley at the ceremonies. Alderman John Egan (second from left) and Stanley Halberg (right), vice president of Continental Airlines, also took part in the ceremony. The Viscount II will be used by Continental on its Chicago-Los Angeles route

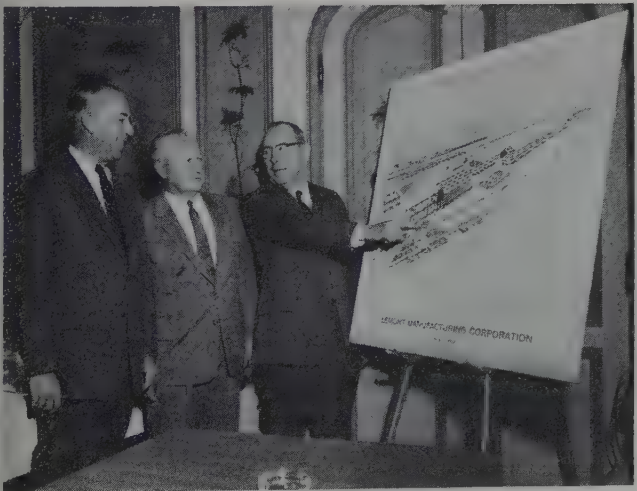
Highlights



Proposing a new downtown building to be built in the air wells of the present city-county building. At first the structure would look like the drawing (right). Later the present structure would be torn down and the area landscaped to leave a 44-story structure (indicated by pencil) or a 64-story as shown by the model. Proponent of the plan is the architectural firm of Friedman, Alschuler & Sincere. With the model and drawings are partners of the firm. They are, left to right: Edwin M. Sincere; Alfred S. Alschuler, Jr.; John H. Alschuler; and Tom R. Friedman



Extra-high-voltage power lines which connect the Commonwealth Edison and American Electric Power Company systems. The 345,000-volt line is the nation's largest for interchange of a bulk electricity supply between two power systems. The interconnection enables either system to call upon the other for help during an emergency and enables both to operate more economically with less generating reserve. The 90-mile tower line runs between Orland Park, Illinois, and New Carlisle, Indiana. It costs about $28 million



Ned A. Ochiltree, president of Ceco Steel Products Corporation, shows a drawing of the $11 million bar steel mill Ceco plans to build to C. Foster Brown, Jr., executive vice president of Ceco; and William Jacobsen, who will be works manager of the new mill. The new mill will be located in Lemont, Illinois. Operating under the name of Lemont Manufacturing Corporation, a new wholly owned subsidiary of Ceco, the mill will have an initial capacity of 120,000 net tons of billet-sized ingots per year. All ingots produced will be used by Ceco in its own fabricating plants in the midwest

William V. Kahler, left, president of the Illinois Bell Telephone Company, visits the offices of Myron H. Fox, right, president of Bell Savings and Loan Association, to congratulate the savings institution on passing the $200 million mark in resources. Although it has never been a part of the telephone company itself, Bell Savings was founded in 1924 by 13 telephone employes as a savings building and loan organization for telephone company personnel. Bell is now 11th largest savings institution in the country, with some 200 employes serving more than 80,000 customers

The Art of

By IRVING FOOTLIK

Irving Footlik

CHICAGO is undergoing a change of face with reference to industrial plants. The mid section of the city and the section close to the loop are beginning to look like ghost areas for all the multi-story buildings that are standing vacant. Ironically some of the multi-story buildings standing empty could be converted into better and more economical production facilities than many of the newly constructed one-story buildings in the outlying areas.

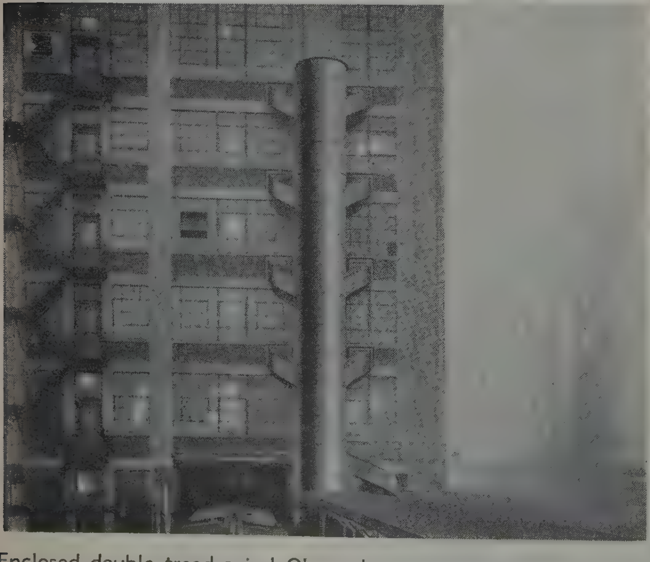
Some of the new plants are so large that it is difficult to control the cost of movement of equipment and personnel across the plant. In one instance, a large grocery chain has found that where a multiple-story building had a higher labor cost per man hour due to higher salaries in the area, the cost of operations in the building per tonnage handled was far lower than a one-story building in another town. This one-story building had lower labor rates but required the men to go from one end of the building to the other and in most instances return empty handed.

Many of the multi-floor operations have been abandoned because of elevator problems. Yet the problem can be solved easily if the elevator is used for one direction travel only, mainly up. All products coming down would be sent by means of spiral chutes, inclined chutes, belt conveyors, and numerous other simple handling systems.

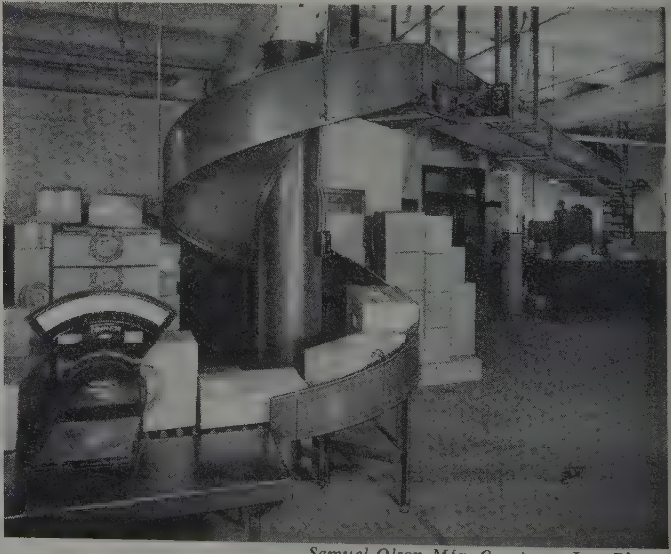
If the finished product is a packaged item and it does not exceed the size of 30″ x 30″ x 30″, it is a logical candidate for a spiral chute system. If so desired, in a six-story building all products can be sent down to the first floor to come out at the same place, namely the shipping room platform. Spiral chutes are not as expensive as they seem. They can also be designed in multiple blades to allow a separation of product from one floor to another. The catalog houses have always used this and found it extremely satisfac-

---

The author is president of Irving M. Footlik and Associates, material handling and plant layout consulting engineers.



Enclosed double-tread spiral Olson chute on outside of building. This chute delivers bundles of printed matter from four floors to railroad cars



Samuel Olson Mfg. Company, Inc. Photos

Single blade, open-type Olson spiral chute receiving cartons from an overhead belt conveyor and delivering to table height roller conveyor

Making Multi-story Buildings Usable

Here are some ways the many multi-story buildings located in downtown Chicago can be converted into usable and economical plant facilities

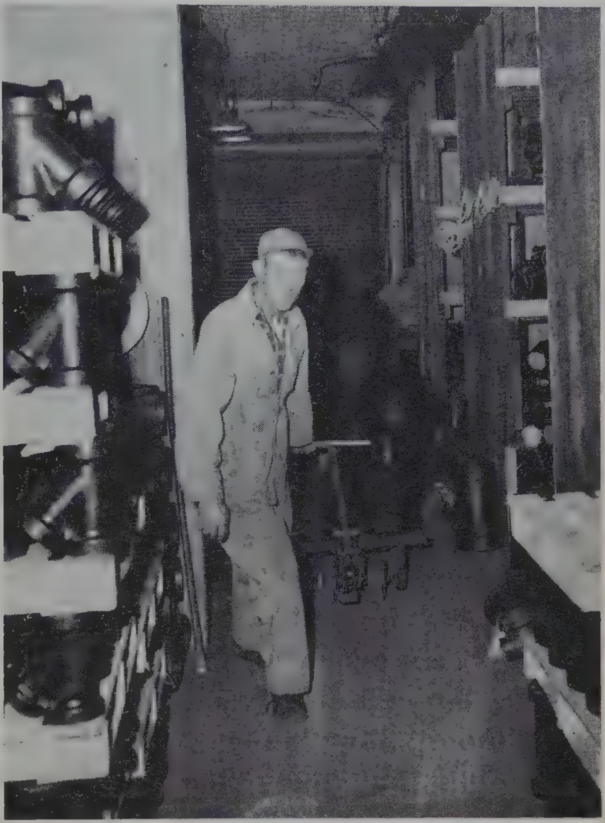
tory. Some have even gone so far as to use the spiral chute for folding tables and fishing poles.

How can elevators be put to practical use? Elevator capacity is usually proportional to speed. In many instances, by slowing up an elevator, greater capacity can be obtained. It is possible also to take mechanical lift truck equipment from one floor to another. Example: Counter-balanced lift trucks. Where the weight might be 4,500 pounds and the elevator capacity 4,000 pounds, the counterweights can be removed from the back end of the truck and taken up separately.

Shorten Waiting Time

Waiting times at elevators can be shortened by preplanning their use. An area in front of the elevator should be prepared in which to drop material that is to be moved onto the elevators. Then the elevator operator can move from floor to

(*Continued on page 32*)



Storing and moving products on pallets facilitates receiving and shipping. Above, a worker at Warren Barr Supply Company moves a pallet full of plumbing pipes

The Barrett Guide-O-Matic Electronic operatorless tractor equipped with newly developed optical guidance system. It automatically follows a painted white line or tape on the floor

When Warren Barr Supply Company needed new quarters it moved toward the heart of the city. Its revamping of a multi-story building included making this ramp between floors

Industrial Packaging

(Continued from page 17)

after these disks and panels were molded, they would be laid out, cookie-fashion, on a corrugated sheet, and moved through from two to ten polishing, painting, and other finishing operations. Then, at the end of the line, the components were wrapped in tissue paper and loaded into a shipping container.

Now, the firm uses the corrugated tote box, which has vertical dividers inside made of the same material. After being molded, from 25 to 250 plastic windows or panels are inserted in this box. The slots in the corrugated dividers hold them upright. At each step in the finishing sequence, the components are processed individually, as before, then are put back in the box. At the end of the line, four to eight boxes are placed in a corrugated carton which, after being sealed, is ready for shipment.

Packing Time Halved

Switching from the spacer sheet to the tote box has cut packing time at the end of the production line in half, reports Production Manager Brown. The number of parts rejected because of scratch marks has been reduced 20 to 25 per cent, he adds. Loading the items as they come out of the molding machine is now accomplished in 10 to 20 per cent less time, and overall, there has been an increase of between 20 per cent and 30 per cent in output. The new dual-purpose tote box also has made Felsenthal's customers happier. The increased accessibility of the components speeds up their incoming inspection and assembly operations.

Another technique for cutting the time and cost of packing small parts, developed by Chicago's Hinde and Dauch Paper Company, is a corrugated sheet coated on one side with a pressure-sensitive adhesive. One or more of these sheets are laid horizontally inside a shipping container, and the parts are anchored to the adhesive surface, which prevents them from moving around in transit. Small electrical coils are among the products that have already been shipped in this fashion. By eliminating the complicated inner packing usually required to keep such small parts in place, the adhesive sheet produces a substantial saving to the shipper.

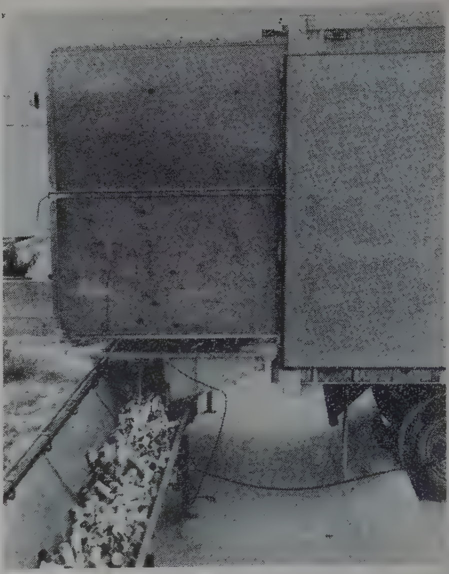
Suppliers of the timers, switches, valves, and other small parts used in Whirlpool appliances now pack these components in specially designed corrugated trays, tailormade to the dimensions of the item involved. A number of these trays are then loaded into a pallet-size shipping container which, when filled, weighs several hundred pounds. The shipping container holds as many parts as a dozen or more of the small corrugated boxes formerly used.

Whirlpool officials report that this tray-packing method, which the company developed in 1955 and then promoted among its suppliers, has produced a saving of from 30 per cent to 70 per cent in the amount of space required for a given quantity of small components. Use of one large shipping container instead of several smaller ones, meanwhile, has cut unloading time at the receiving dock by as much as 80 per cent, it is added. In the first year the plan was operating, Whirlpool cut its shipping costs $50,000.

One of the chronic headaches in many shipping rooms is the product which comes off the production line in a number of different sizes. A somewhat similar problem is created when a firm turns out a line of related products, each one varying in length, height, and/or width. If the customer orders only a relatively few units of each size or type of item, overall dimensions of the container used for each order will vary considerably. Efficiency of the packing room crew will probably be cut as a result, because they'll undoubtedly spend a good deal of time scoring and cutting boxes to the proper size.

"Adjusta-Pak"

One answer to this bottleneck is "Adjusta-Pak," an ingenious method of packaging offered by Chicago's Signode Steel Strapping Company. Basically, an "Adjusta-Pak" consists of eight scored and slitted corrugated sheets. Each sheet is folded along its scored lines, then stapled. This operation forms two upturned edges that meet at one corner of the sheet. Then, four sheets are laid on top of each other so that they form an open box. By sliding the sheets in or out, interior dimensions of the container can be changed easily. After the box is adjusted to the proper size, and filled, a second, identical container is formed from the four remaining corrugated sheets. This latter box is laid on top of the load and the resulting package is banded with metal strapping to hold it together in transit.



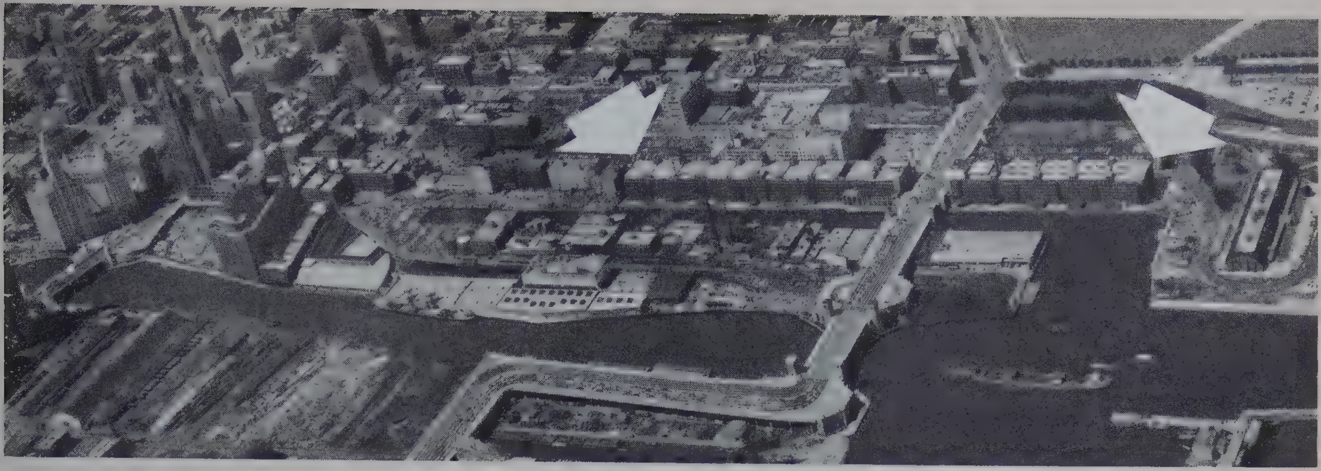
Jumble-Pak, developed by American Can Company, to facilitate unloading of cans

Fits Need of Product

The unusual feature of this packaging technique is that the length, width, and height of the container can be varied within wide limits to fit the needs of the product inside. The sheets are offered in three basic sizes; one size, as an example, will form a container as small as 18x18x12 inches and as large as 30x30x12 inches.

Adjusta-Paks are being used to ship everything from Sunday School lessons to men's toiletries, airplane engine parts to knit cotton underwear. Among Signode's customers is the National Vulcanized Fibre Company, of Yorklyn, Delaware. Previously, the firm had to stockpile 150 different sizes of wooden shipping crates. Now it uses three sizes of Adjusta-Pak sheets. The company reports it has saved $16,000 a year in shipping materials alone, not to mention additional savings stemming from a reduction in the amount of space required for storage of empty containers.

Plastics have been used widely for



Arrows point to main North Pier Terminal buildings on Lake Shore Drive showing prime central location near Lake Michigan and the Chicago River.

If you distribute from the outskirts of Chicago or from a suburb . . .

YOU CAN CUT COSTS 23%

by moving to North Pier Terminal

If your rent, maintenance, taxes, insurance and time loss cost you $100,000.00 annually . . . we can save you $23,000.00!

How? Check these points for money-saving answers. It's because you will:

Locate right in Chicago's *uncongested* front yard — just five minutes from the Loop. Time-saving for your salesmen, your customers, your help.

Enjoy a modern, air-conditioned office (with your warehouse) in a clean, prestige location, 444 North Lake Shore Drive, facing Lake Michigan.

Take advantage of an excellent labor market. Attract the kind of help you want.

YOU CAN SAVE 23%!

Have plenty of parking space adjacent, any hour of the day.

Speed your pick ups and deliveries with all major truck, rail and marine lines nearby.

Get extra help when needed for scheduling, routing, loading and unloading.

Pay *only* for the space you use. You get extra space by the month during peak periods, or can use less space during slack seasons.

Save on rent, taxes, and insurance. Your low-rent contract covers many "extras" such as heating, watch and elevator service, maintenance, etc.

Eliminate the expense and worry of operating your own building.

Use railway express facilities right in our building. Get CL, LCL, TL, LTL and express service to your door at no extra cost.

Let 72 large firms (our tenants) tell you North Pier Terminal is Chicago's finest location.

This is the year to save . . . this is the year for progress. Let us show you how to make this 23% savings *yours.* Please call or write W. W. Huggett, President, or S. T. Heffner, Vice President, for more information. No obligation.

NORTH PIER TERMINAL

444 North Lake Shore Drive, Chicago 11, Illinois. Phone Superior 7-5606

Ask about other NPT public warehouses and harbor facilities at Lake Calumet, downtown at Navy Pier and at the mouth of the Chicago River, and another warehouse on Clybourn Avenue.

consumer containers but haven't aroused much interest among industrial packaging engineers — until recently, that is.

A pioneer in the development of plastics as a bulk-shipping material is Minnesota Mining and Manufacturing Company, which has built a portable plastic container that permits large quantities of freight to be moved by rail, then delivered by highway trailer. This portability idea isn't particularly new — steel and aluminum boxes designed for the same purpose have been in use for some time. But Three M's plastic box reportedly has a number of advantages over the others. Chief among these is light weight. The new container, built of reinforced plastic laminates, also is said to have higher thermal efficiency and corrosion resistance. Mechanical fastenings — which tend to be the weakest link in structures of this type — have been eliminated.

Refrigerated Container

Several months ago, the Rock Island Lines used a refrigerated version of the three M container, on an experimental basis, to move sides of beef and other meat products between Chicago and St. Joseph, Missouri. The box, measuring 17x8x8 feet, accommodated 14,000 pounds of meat. The railroad, reportedly, is highly pleased with the results of this test, and believes the new box can be used for a number of other products.

Of particular significance is the fact that the new container permits refrigerated loads to be put on and taken off a railroad flat car by lift truck. U. S. railroads are now handling appreciable amounts of nonperishable freight with this "lift-on, lift-off" method. It's a key weapon in their competitive struggle with other types of freight carriers. The load moves most of the way by rail, but is picked up and/or delivered by truck, saving the shipper a good deal of time compared to the all-rail trip. The new plastic box, since it is the first one developed specifically for rail shipment of refrigerated freight, could add an important new dimension to lift-on, lift-off service.

Flexible rubber and plastic containers designed to handle a wide variety of liquid and granular products have also been developed in the past few years.

Smart Sales Executive!

He planned his Business Meeting in the sparkling new

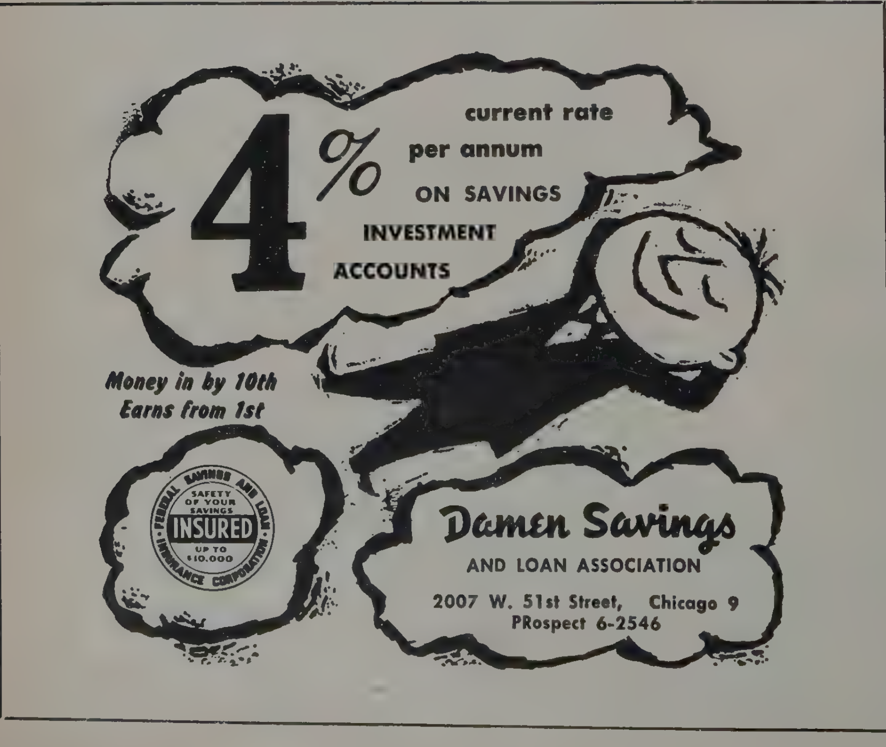
4-Seasons Room

Stock Yard Inn
Home of the
Internationally Famous
Sirloin Room

Business meetings of any size take on a special meaning when they are held in the newly remodeled and air-conditioned FOUR-SEASONS ROOM of the Stock Yard Inn. Excellent menu and moderate prices appeal to every sales budget!

Banquet prices tailored to fit your budget

Check Now for Availabilities. . . YARDS 7-5580



4% current rate per annum
ON SAVINGS
INVESTMENT ACCOUNTS
Money in by 10th Earns from 1st
FEDERAL SAVINGS AND LOAN INSURANCE CORPORATION
SAFETY OF YOUR SAVINGS
INSURED
UP TO $10,000
Damen Savings
AND LOAN ASSOCIATION
2007 W. 51st Street, Chicago 9
PRospect 6-2546

One example is U. S. Rubber's "Sealdtank," which resembles a gigantic toothpaste tube. It's made of four plies of rubber-coated rayon tire fabric, which are faced on the outside with neoprene. The Sealdtank is made in various sizes which have capacities of from 3,800 to 20,000 gallons. Main advantage of the container to truckers and railroad operators is that it permits them to move liquid or granular products in equipment designed for solid freight. Several companies are using Sealdtanks for permanent storage as well as for movement of bulk commodities. The cost is reportedly much lower than that for permanent storage facilities.

A somewhat similar development is the air-supported plastic warehouse. The first firm in the nation to market one of these structures is CID Air Structures Company, located on Chicago's far south side, which began operations late in 1956. One CID "Air House," has been installed in the midst of the Libyan desert, another is set up in Greenland. Users include Johns-Manville, Chemstrand, Sandia Corporation, Continental Can, Corn Products Refining, the U. S. Navy, Marine Corps, and Army Corps of Engineers. Besides storing such items as castings and other metal products, bagged feed, salt, and building materials, Air Houses are being used as temporary shelters for construction and maintenance crews, and as garages and repair shops. Recently, an agricultural fair was held inside an Air House at the University of Illinois. More than 15,000 persons passed through the structure during the fair's three-day run.

Air House

CID's Air House is made of 16 ounce vinyl- and hypalon-coated nylon. No artificial lighting is needed inside because the fabric is translucent. The largest unit is 60 feet wide, 120 feet long, and 30 feet high. It comes to the erection site rolled up in a cylinder that weighs 1,400 pounds and measures 7 feet long, 3 feet wide, and 2 feet high. The cloth is unrolled, then raised off the ground into a breadloaf-shaped warehouse by means of air pressure supplied from a small electric blower. Erection time is about an hour. The base of the air house is held down, typically, with sand ballast inserted into a pocket running around the edge of the fabric.

There is a door at one end of the Air House, which permits lift trucks or personnel to enter and leave at will. The blower, which continues to operate after the structure is in place, replaces the air pressure lost while the door is open.

CID officials maintain that the Air House provides far cheaper storage than permanent or rented space. One customer, a food manufacturer, reportedly saved enough on rental warehousing costs to pay for his Air House after it was in service for five months.

Some precision machinery and home appliances shipped in wirebound boxes are now being wrapped in plastic bags beforehand to protect them against dust, dirt, and scratching. General Box Company, in suburban Des Plaines, world's largest manufacturer of wirebounds, pioneered this idea about six years ago, and today has a couple of dozen customers using the technique. Some of them are manufacturers of granular plastic products who, previously, had used other, more expensive packaging. General Box officials believe that the plastic bag (kraft pa-

Waldorf Cartons Win 6 National Awards

in 1958 Folding Carton Competition

Merit Award
Merit Award
Merit Award
Merit Award
Merit Award
Merit Award
Superiority of Construction
Waldorf Paper Products Company
Continuous Roll Gift Wrap Paper

In the 13th annual competition sponsored by The Folding Paper Box Association of America, more than 9,000 entries were submitted. A total of 100 awards were granted. Waldorf cartons won the following:

CARTON MANUFACTURED FOR	AWARD CLASSIFICATION
Theo. Hamm Brewing Company	— Technical Superiority of Printing — Lithography
John Morrell & Company	— General Merchandising Superiority — Food
Kraft Foods Company	— Technical Superiority of Printing — Lithography
Hallmark	— Superiority of Construction
Armour & Company	— General Merchandising Superiority — Food
Kraft Foods Company	— General Merchandising Superiority — Display Containers

Call us for assistance in connection with packaging. Our facilities and experience are at your service.

WALDORF PAPER PRODUCTS COMPANY
MIdway 6-7321 • St. Paul 14, Minnesota

PAINTING

ANTI-CORROSION EXPERTS

- INDUSTRIAL & COMMERCIAL
- EXPERIENCED MACHINERY PAINTING

SATISFACTION GUARANTEED

Your satisfaction for color, durability and workmanship are guaranteed by F. W. Dorman & Co.

CALL or WRITE . . . NO OBLIGATION

F. W. DORMAN & CO.

5509 N. CLARK ST. CHICAGO 40

RAvenswood 8-3100

A GREAT FOURSOME!

1 A.O.Smith Burkay

"LOADS OF HOT WATER FOR ANY PURPOSE"

2 REZNOR

THE WORLD'S LARGEST-SELLING GAS UNIT HEATERS

3 JACKSON & CHURCH

OIL-COAL-GAS FURNACES UP TO 4 MILLION BTU's

4 PEERLESS

VENTILATING BLOWERS

FREE ENGINEERING! Lowest Prices. Available at

INDUSTRIAL DIV.

CHICAGO FURNACE SUPPLY CO.

1278 CLYBOURN AVE. • CHICAGO 10

MOhawk 4-1300

A. J. BOYNTON AND COMPANY

ENGINEERS AND TECHNICAL COUNSELORS

A COMPETENT ENGINEERING ORGANIZATION, COMMITTED TO RENDERING ACCURATE AND EFFICIENT TECHNICAL SERVICE.

DESIGN OF PLANTS FOR PROCESS INDUSTRIES, BASED ON ECONOMICS OF PRODUCTION INCLUDING

LAYOUT STRUCTURES

EQUIPMENT AND AUXILIARIES

MATERIAL HANDLING

AUTOMATION

ECONOMICS AND DESIGN

FIXED AND MOVABLE BRIDGES

PRODUCT DESIGN

MACHINE DESIGN

ENGINEERING

OFFICE AND FIELD

ELECTRICAL STRUCTURAL

MECHANICAL CIVIL

CHEMICAL SANITARY

METALLURGICAL

109 N. WABASH AVE., CHICAGO

TELEPHONE: CENTRAL 6-8442

per bags are also used for some products), opens a number of new sales fields for manufacturers of wirebound containers. Granular chemicals and grains are among the likeliest possibilities, it is added.

Plastic barrier coatings have been applied to the inside surfaces of metal drums for many years to prevent the contents from being affected by the container metal. Applying the plastic so that it is free of blisters and pitholes has proved to be a rather large order. Recently, Chicago's Rheem Manufacturing Company developed a new machine that largely eliminates the problem.

It consists of a high-speed rotor that dispenses the plastic in a fine, carefully controlled mist which deposits on the inside surface of the drum. Previous practice was to rotate the drum and keep the dispensing mechanism stationary. Under this arrangement, air turbulence was created which caused dust particles to mix with the plastic and reduced the quality of the finished job. This contamination problem has now been licked, says Rheem. Also, use of the high-speed (3,600 rpm.) rotor, combined with special curing ovens makes it possible to use low-solvent coating materials that have far less tendency to develop pinholes and blisters.

"Jumble-Pac"

Another new wrinkle in industrial packaging and shipping methods is the "Jumble-Pac" developed by American Can Company. The system consists essentially of a specially designed box that fits into a truck trailer fitted with a slat conveyor bottom developed by Link-Belt. The box, piled to the top with empty cans, sits on a belt conveyor. When the truck reaches the food processor's dock, the conveyor shifts the box so that most of it projects beyond the tailgate. The cans drop through trapdoors into a machine that arranges them, open end up. Then they're fed directly to the customer's filling lines.

The big saving comes from the fact that the containers can be loaded automatically, without regard to arrangement. Present method of moving empty cans is to line them up in orderly rows inside the truck trailer, and protect them with liners, fillers, and dunnage. For some time, American Can has been using the jumble-loading method to ship six ounce fruit juice cans from its plant at Plymouth, Florida, to two nearby canneries operated by Minute Maid Company. Minute Maid officials report that the new technique has produced substantial savings in their materials-handling costs.

Here, There and Everywhere

(*Continued from page 8*)

of office equipment. Under the plan of Kriloffice, Inc., any company or professional man can rent a complete office layout including furniture, floor coverings, and draperies.

Plaques made of leather. Beaux Arts Englossers, Chicago, has developed a new line of leather plaques, produced from heavy sole leather and embossed in the rich colors of ancient parchment documents. Prices are said to be competitive with wood and metal plaques.

- ***Ore Import Record*** — Last year was the fifth consecutive year in which a new record was set in United States imports of iron ore. The 37.8 million net tons supplied by foreign countries was 11 per cent higher than the previous record, set in 1956, and nearly 44 per cent above 1955 imports.

Trends in Business

(*Continued from page 10*)

nine cents or more, a gain of six per cent from the year before.

- ***Housing Index Declines*** — For the first time in 32 months the housing component of the National Industrial Conference Board's Consumer Price Index has turned downward. The decline in this component (which includes furnishings and equipment) in March, 1958, coupled with the decrease in transportation costs was sufficient to partially offset the sharp rise in food costs and continued slight rise in services. The retail price level in March brought the all-items index for the U. S. to 106.8 (1953=100), a slight gain of 0.2 per cent over February, 1958, and an increase of 3.0 per cent above year ago levels. Purchasing power of the consumer dollar declined to 93.6 cents (1953 dollar=100 cents), which was 0.2 cents below the February, 1958, value and 2.8 cents below March, 1957.

EMERSON ELECTRIC

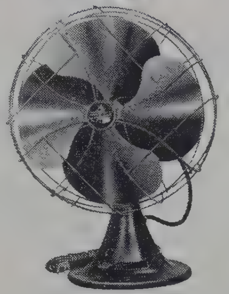
FANS

LAU

AMERICA'S FINEST...
FOR OFFICE
INDUSTRIAL
INSTITUTIONAL
OR DOMESTIC USE

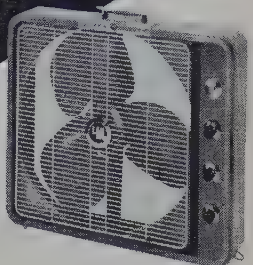
EMERSON DEACON

Years of trouble-free service! 24″ and 30″ blade sizes, 2 speeds: 24″, 1120-770; 30″, 1025-425 rpm. 115V, 60 cycles, 220-130 and 340-130 watts. 5000 to 7000 cfm (NEMA) range. Floor column, wall or ceiling mountings available. Designed for heavy-duty service in office, church, store, restaurant, factory. *Five year guarantee.*



EMERSON OVERLAPPING BLADE

Incomparable for general office purposes. Very quiet motor. 12″ and 16″ sizes, 115V, 60 cycles. Three speeds: 12″ oscillator, 1320-1200-1000 rpm, 1150 cfm (NEMA). 16″ oscillator, 1070-925-800 rpm. 1700 cfm (NEMA). Completely adjustable, suitable for stand-up or wall mounting. *Five year guarantee.*



LAU ULTRA-TWENTY

The portable air circulator that sets the pace for the home or executive office use! 20″ Duo-Flo blades, recessed control panel. Saf-T-Eye power indicator; 3-speed control: 3950 cfm (NEMA) Maximum, 1000 rpm. Electrically reversible. New decorator colors. Window spacer panels available. *Five year guarantee.*

OFFICE and PLANT MANAGERS, PURCHASING AGENTS:

call us to help meet your office, factory or institutional fan requirements.

Chicago's Outstanding Electrical Distributor

REVERE ELECTRIC SUPPLY CO.

2501 W. WASHINGTON BLVD. • SEeley 8-3636 • CHICAGO 12, ILLINOIS

TIN PLATE

TERNE PLATE

BLACK PLATE

Sheet
Strips
Circles
Scrap

NEvada 8-4100

LOU STEEL PRODUCTS COMPANY
923 S. KOSTNER AVE., CHICAGO 24, ILL.

DE LEUW, CATHER & COMPANY

CONSULTING ENGINEERS

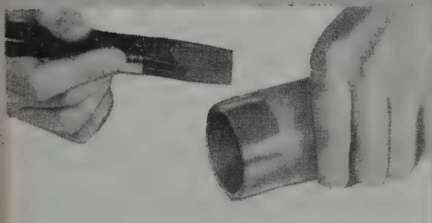
Public Transit	Subways
Traffic & Parking	Railroad Facilities
Expressways	Industrial Plants
Grade Separations	Municipal Works
Urban Renewal	Port Development

150 North Wacker Drive, Chicago 6
San Francisco Toronto Oklahoma City

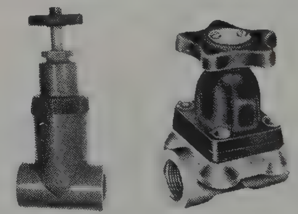
PIPE DREAMS come true!

Mr. Usco introduces the complete family of pipe, valves and fittings!

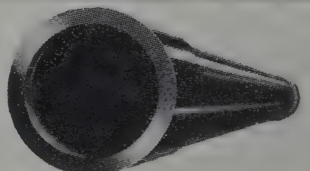
USCOLITE® plastic pipe comes in two specific types, each equally good for its particular purpose. Uscolite CP for high impact resistance, Uscolite RV (PVC) for active oxidizing agents. Not one foot of pipe has had to be replaced in the 10 years since first installed.



USCOWELD* Fittings are the only solvent-weld fittings with an interference fit. Greater joint strength, faster insertion. Non-porous, leak-proof. Made of either Uscolite CP or RV materials.



USCO® VALVES offer a choice of either Hills-McCanna diaphragm valve or Vanton "Flex-Plug" gate valve.



USCOFLOW is a new, black utility pipe, especially suited where low first costs are a factor. It is a blend of styrene-base resin and synthetic rubber for good impact resistance and high tensile strength.

The "Usco" Plastic Pipe Line of precision-molded pipe and fittings for every corrosion and flow problem includes elbows, tees, couplings, flanges, reducing bushings, plugs, caps, nipples, bends.

When you think of plastic, think of your "U.S." Distributor. He's your best on-the-spot source of technical aid, quick delivery and quality plastic pipe and fittings.

REPRESENTING

U. S. Rubber • Walworth • Crane • Lunkenheimer • Hills-McCanna • Henry Vogt • Tube Turns • Youngstown Steel • National Tube • A. M. Byers • Babcock and Wilcox • Clayton Mark • Helicoid Gauge • General Controls • Camco • Jamesbury • Lonergan • Aloyco Valves

SAUNDERS and COMPANY

3445 SOUTH LAWNDALE AVENUE • CHICAGO 23 • PHONE: BIshop 7-550

Industrial Developments

. . . in the Chicago Area

INDUSTRIAL developments in the Chicago metropolitan area announced in the month of May totaled $22,676,000, more than double the figure for May, 1957, which was $10,414,000. This total was for twenty-seven projects, the largest total for any month this year to date. In the first five months of 1958, industrial development projects announced here totaled $71,057,000 compared with $85,288,000 in the first five months of 1957.

Types of projects covered in these reports include construction of new and expanding industrial plants and the acquisition of land or buildings for industrial purposes.

• ***Ceco Steel Products Corporation***, one of the nation's largest suppliers of light structural and related steel products, has started work on a new steel producing unit near Lemont which will be known as Lemont Manufacturing Corporation, a wholly owned subsidiary of Ceco. The new steel production plant will be located on an 88-acre tract two miles West of Lemont situated between the Santa Fe Railroad and the Chicago Sanitary and Ship Canal. It will consist of a 40,000 square foot electric-metal shop, an 89,000 square foot rolling mill, and auxiliary buildings, including a canal dock. The plant is expected to be in operation by the fall of 1959, and will be running at capacity by 1960. The mill will have a capacity of 120,000 tons of billet-sized ingots per year, which will be entirely consumed by Ceco's own operations. It will produce a wide variety of products such as channels, angles and rounds, all sizes of reinforcing bars, and special architectural shapes. Rust Engineering Company, general contractor.

• ***Western Electric Company***, has broken ground for a 550,000 square foot distribution center located on a 140-acre tract of land at Hawthorne lane and Kress road near West Chicago. The new warehouse structure is on a site that was purchased last September, and will serve the rapidly expanding population needs of the northern Illinois territory served by Illinois Bell Telephone Company. The building is scheduled for completion in the fall of 1959 and will be equipped with its own chlorinated water supply, a private sewage disposal system, a motor vehicle repair shop, pole and cable storage yard, cafeteria, lounge, medical facilities, parking area, and railroad spur to the Northwestern Railway. It will have an initial employment of 1,000 persons.

• ***Air Products, Inc.***, of Allentown, Pa., has broken ground for a new plant between 127th street and the north bank of the Calumet River at Wentworth avenue in the City of Chicago. The plant will produce high purity oxygen, which will be piped across the little Calumet River for use in Acme Steel's Riverdale plant for steel production facilities which are now under construction. This new air separation unit will not emit smoke, odors, gases or other nuisances, and its products will be utilized in Acme's oxygen blown converter. It will consist of compressors, heat exchangers, cooling towers, and pumps for use in the oxygen production operation.

• ***Offner Products Corporation***, 5320 N. Kedzie avenue, manufacturer of electronic devices, has started construction on a 26,000 square foot building in Schiller Park. Friedman Alschuler and Sincere, architect; E. L. Hallbauer Construction Company, general contractor.

• ***Acme Gravure Services, Inc.***, 1501 Congress street, has broken

SINCE 1888
TAFT
MACHINERY MOVING
WE ERECT ANYTHING MECHANICAL
MACHINERY MOVERS
MILLWRIGHTS
MACHINISTS
HEAVY HAULING
LICENSED - BONDED - INSURED
MO nroe 6-4114
TAFT CONTRACTING COMPANY, INC.
1125-1131 W. ADAMS

"A Name You Can Trust"
EMPIRE
ROOFING CO.
Industrial, Commercial and Residential Re-roofing. Flat Roofs, Steep Roofs, Any Roof that Requires "Hot Stuff."
THAT'S OUR BUSINESS
CALL US MONROE 6-8828
1143 S. Western Ave.

FOR SALE
38,000 sq. ft. bldg. — 87,000 sq. ft. land
9,000 sq. ft. air-conditioned offices
Zoned industrial — switch
Northern Suburb
J. J. HARRINGTON & CO.
22 W. Monroe St., Chicago 3
Telephone FInancial 6-1322

TO SERVE YOU BETTER

We have moved our office and warehouse to 2045 N. Cornell Avenue, Melrose Park, Illinois, to enable us to better serve the diversified Chicagoland electrical industry as it exists today.

This new, modern plant, completed in May, 1958, incorporates all the latest known order handling and warehousing techniques.

Modern pneumatic tube systems and tow-veyors enable our people to give you quick service and our 200 car lot eliminates your parking worries. Our greatly increased stocks give you the widest possible selection of electrical material.

This new home of the Graybar Electric Company is modern, convenient and efficient—but the primary reason for this move is to enable us to offer you a new standard of service.

GraybaR QUALITY SINCE 1869

GraybaR
ELECTRIC COMPANY
2045 N. CORNELL AVE. • MELROSE PARK, ILL. • Phone AUstin 7-7700.

HW Sandblast Company
SINCE 1935
CONTROLLED SURFACES

SANDBLASTING
Our Largest Room 22 x 40
SHOT PEENING
To Federal Specifications
GRIT BLASTING
VAPOR BLASTING

24 HOUR SERVICE
3213 S. WENTWORTH AVE.
WAgner 4-3500

ground for a new plant to be located in the Northwestern Industrial Park in Rolling Meadows. The first building to be erected in the 205 acre industrial park, the Acme plant will contain 23,000 square feet of floor area and will be devoted to gravure engraving and plate manufacturing. Ralph Stoetzel, architect; Joseph T. Carp, Inc., general contractor.

• ***J. W. Clement Company*** of Buffalo, N. Y., has purchased the plant at 1800 W. Fullerton avenue, formerly owned by American Colortype Corporation. The 240,000 square foot building will be the first Chicago area plant for the Clement Company which is engaged in printing and map making. The Chicago facility will be Clement's fifth printing plant, and will be operated as Clement Colortype, Inc., on a ten-acre site which includes a six-story building and two recent additions.

• ***S. Falbo Cheese Company,*** 3923 W. Chicago avenue, is erecting a new plant at 1931 N. 15th avenue, Melrose Park which will contain 22,000 square feet of floor area. It is scheduled for completion in the fall. The company will move its operations to the new building upon completion. Otto E. Strobel, architect and engineer.

Our Missile Program

(Continued from page 15)

whom some 18,000 are scientists and engineers.

The experience and know-how we have acquired in our program and the science - industry - government team which we have built provide a proven, solid, expandable foundation for future United States' advances in space technology. Our defense programs are inseparably bound up with the need for a united effort by the military, by industry, by education and by all agencies, public and private. We have an urgent need for more scientific and technical education if our country is to match and overtake Soviet advances in missile and other space technology.

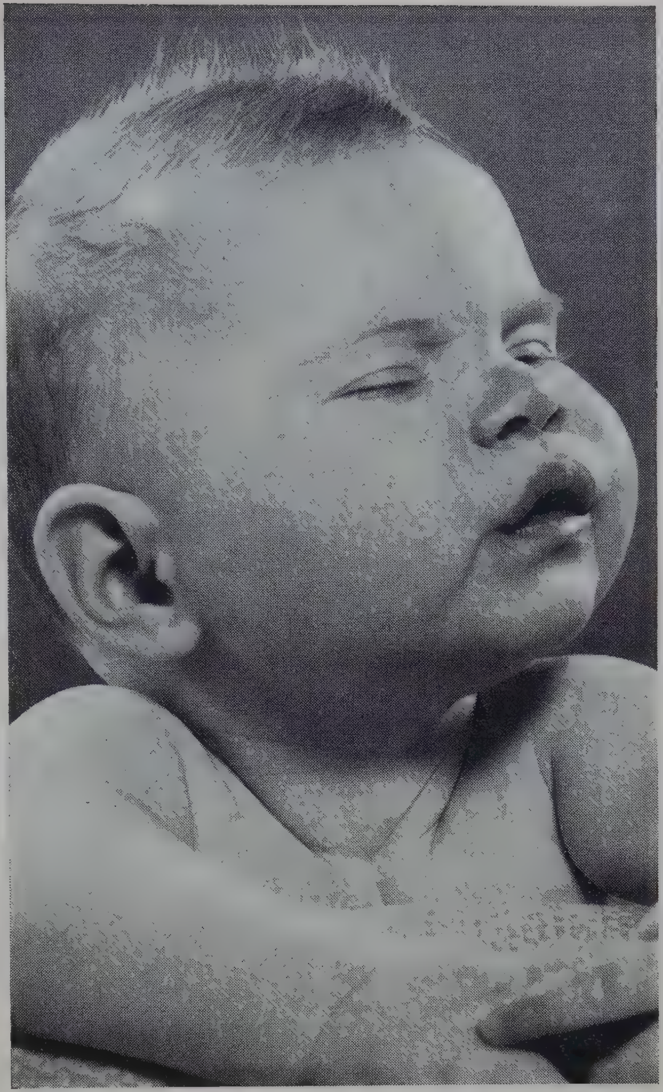
Our educational requirements now are even more urgent and exacting than they were only a year ago. In this respect, Chicago, together with Detroit, Indianapolis, and other cities, has displayed such initiative and imagination in facing up to the need to adapt educational programs in secondary schools, as well as in college and university, to our emerging space age.

Chicago, moreover, demonstrates the principle that if we are to survive, we must recognize that national security is everybody's business. The contributions of the Chicago area to our Air Force missile program underscore the validity of this point. At the Armour Research Foundation in the Illinois Institute of Technology, for example, our program has drawn upon research services in special materials, propellant chemistry, combustion chamber design, and ozone densitization.

Gas Dynamics

By the same token, Northwestern University has done outstanding work on gas dynamics and heat transfer, both vital to solving the nose cone re-entry problem. As a matter of fact, Northwestern's Gas Dynamics Symposium some two years ago was not only attended by leading scientists from all over the country, but also by many of our key scientific personnel from our Air Force Ballistic Missile Program. The University of Chicago has accomplished outstanding work in plasma physics and magnetohydrodynamics, a new science which could theoretically furnish the basis for a propulsion system ten times as powerful as the most advanced system now in use. The Chicago Midway Laboratories is conducting extremely important research on re-entry problems having to do with high temperature air arc wind tunnels.

In looking ahead to our future developments, in missilery and other phases of space technology, we must temper imagination with realism and daring with objectivity. On this score, we should all keep in mind the criteria recently proposed by our Ballistic Missile Division chief scientist Doctor Simon Ramo. He has pointed out that, "We cannot be first and foremost in today's world in every aspect of science. In particular, in space technology, there are so many experiments that are practical to perform, so many attractive systems for military or peacetime applications, that can be brought into being, utilizing outer



"NOW, WHAT WAS THAT SUPPLIER'S NAME ?"

"I just couldn't recall the name of that supplier—so I looked in the Yellow Pages and found him in a hurry!"

Everybody looks in the YELLOW PAGES

AIR CONDITIONING VENTILATION

Dust Collecting and Fume Removal Systems
Sheet Metal Fabricators
Welding—Spot - Electric - Arc - Acetylene

SEeley 3-2765
1931 W. LAKE ST.

Haines

THE HAINES COMPANY
ESTABLISHED SINCE 1900

L. J. GRAF Construction Co.

General Contractors

Industrial and Institutional
Builders

6327 N. Pulaski Road
Chicago 46, Ill.
KEystone 9-6700

BREWERIES . . .

. . . one of the basic industries supplied by UNITED ELECTRIC with coal shipped by the All-Water Route on the Inland Waterways and to Great Lakes Ports

United Electric pioneered the all-water route which now makes huge tonnages of coal available by low-cost transportation to public utilities and industries on the Inland Waterways and at Great Lakes Ports. This new economical coal distribution service offers you important benefits. The United Electric Representative will be glad to give you full information.

FIDELITY
domestic and industrial stoker coal

CUBA-BUCKHEART
precision prepared coals

MARY MOORE
No. 7 Illinois for industrial and utility use

BUFFALO CREEK
washed West Kentucky No. 6 industrial and domestic stoker coal

RUBY
washed West Kentucky No. 11 for industrial and domestic use

THE UNITED ELECTRIC COAL COMPANIES

CHICAGO, 307 N. Michigan Ave., Phone CEntral 6-6580

PEORIA, Commercial National Bank Bldg., Phone 3-3711 • ST. LOUIS, Ambassador Bldg., Phone GArfield 1-3732

space, that any country with substantial resources choosing to work in this field must be expected to conceive and carry out some favored project ahead of other nations.

"Thus, if we send up many satellites, for world-wide TV relays, general navigation, communications and mapping, and land instruments on the moon, and orbit around and take pictures of Mars, that still leaves to another nation during this same period the planet Venus, satellite systems to participate in weather predictions and control, and manned space stations . . . scientific experts can help by indicating how much can be accomplished at a given time and at a given cost . . . but ultimately the people as a whole, through their elected representatives and their government officials, must make these choices."

In making these choices there must be the widest possible public discussion and debate over alternatives clearly defined and understood. This ability to choose alternatives is the cornerstone of our democracy, the core of our faith in freedom. Moreover, we affirm that the values and standards of freedom must be chosen voluntarily in the marketplace of ideas and never imposed by force on anyone. The success of our Air Force ballistic missile space program can therefore be measured by the extent to which it supports and strengthens the ability of people everywhere to build the kind of world in which man can choose the right to be free, and can walk in dignity and work in concert and live in comity with their fellows.

Multi-Story Buildings

(*Continued from page 21*)

floor, bringing the material on and setting it off in the designated area set aside in front of the elevator.

The major part of moving supplies and products by elevator can be done on a different hourly cycle. Temporary operators can be utilized on the elevator during the noon lunch hours. Operators can also work on a part-time shift in the evening. They will probably move four times as much as during the regular day.

Electronic tractors that solve the elevator problem are on the market. This electronic tractor can pull a

(*Continued on page 34*)

Transportation and Traffic

THE Surface Transportation Subcommittee of the Senate Interstate and Foreign Commerce Committee, headed by Senator George A. Smathers of Florida, has released its recommendations resulting from hearings on the problems of the railroads. Briefly, the recommendations are:

1. To establish a plan of guaranteeing loans made by commercial lending institutions to aid railroads that are unable to obtain needed funds through ordinary commercial channels;
2. To provide for the establishment by common carriers of a "constructive reserve" fund as a means of obtaining tax deferrals to stimulate investment in equipment and other necessary transportation facilities;
3. To add the following new subparagraph to Section 15(a) of the Interstate Commerce Act: "In a proceeding involving competition with another mode of transportation, the commission, in determining whether a rail rate is lower than a reasonable minimum rate, shall consider the facts and circumstances attending the movement of the traffic by railroad and not by such other mode";
4. To make more effective those provisions of the act enabling the commission to remove discrimination against interstate or foreign commerce found to result from intrastate rates;
5. To vest the commission with authority to authorize the discontinuance, curtailment or consolidation of unprofitable railroad services and facilities burdening interstate commerce;
6. To limit the scope and application of the agricultural commodities clause of the act in accordance with Ruling 107 of the Commission's Bureau of Motor Carriers, with the exception of frozen fruits and vegetables and imported agricultural commodities, which would be made subject to regulation;
7. To make it clear that all commercial transportation of property by motor vehicle, except private carriage and transportation otherwise specifically exempt, is subject to regulation, thus incorporating into law the prohibition against buy and sell operations; and
8. To provide for a transportation policy study group of three qualified transportation experts to study important matters of transportation policy and report thereon within 18 months.

The committee also recommends that the federal taxes on transportation be repealed, that charges for carrying mail be more equitable, and that a more realistic depreciation allowance on railroad plant and equipment be established. On May 8 Senator Smathers introduced S. 3778, a bill to implement the recommendations of the subcommittee.

• ***Rules Relieving Carriers of*** Duty to Serve Struck Plants Ordered Cancelled: Tariff rules attempting to relieve motor carriers and railroads of their obligation to perform pickup and delivery service at plants where there are strikes or other labor disturbances have been found unjust and unreasonable and ordered cancelled by the Interstate Commerce Commission. These so-called "impracticable operation" rules excused common carriers from serving a plant site because of the existence of "riots, strikes, picketing or other labor disturbances." In its report and order in No. 31944, Pickup and Delivery Restrictions — California — Rail, and related cases, the commission said: "As derived from the common law the duty to serve all shippers making reasonable request for service was almost absolute, but a severely limited number of excuses for nonperformance was

FOR *BETTER* TRANSPORTATION

• Whether you ship freight or travel yourself...you can look to the BURLINGTON for the kind of transportation you want.

Burlington's fast diesel-powered time freights will move your shipments carefully and expeditiously. And when you're heading Northwest, West or Southwest, remember that smart travelers say: "*You just can't beat the Zephyr fleet!*"

For *better* transportation... ship or travel via Burlington.

Chicago, Burlington & Quincy Railroad

available to the carrier if the proximate cause therefor could be traced to (1) acts of God or (2) enemies of the King. Through the years the number of justifiable excuses has been expanded to include other physical obstructions to service brought into play by a *vis major*. Additionally, the carriers have always been privileged to make reasonable rules to regulate the manner of their operation, a matter quite distinct from failure to render impartial service. At no time has the sanctity of the general rule which assures nondiscriminatory treatment of shippers been violated unless it could be demonstrated that the intervening forces were outside the legal control of the carrier and were susceptible of proof by objective facts. The intangible barriers of peaceful picket lines coupled with union contractual provisions acquiesced in by the carriers constitute something less than the physical obstructions historically acceptable at common law. Indeed to accept such as excuse would be diametrically contrary to the accepted legal doctrine that parties may not by entering into a contract alter the rights of third parties. The Interstate Commerce Act reinforces but does not abridge or alter the remedies existing at common law. See Section 22. Likewise the public interest lies in the direction of restraining possible discriminatory practices by the carriers. Therefore, unless or until Congress changes the public policy upon which the Act rests, we cannot find lawful tariff rules violative thereof."

Multi-Story Buildings

(*Continued from page 32*)

trailer load of merchandise, take it to and signal for the elevator to come to the floor. It will wait until the elevator door opens, enter, signal all clear, the door will close, the elevator will go to the floor the tractor desires. When the elevator reaches this floor and the door opens, the truck leaves and signals all clear again so the elevator door will close, then proceeds to its destination on this upper floor. At its destination it unhooks the trailer, proceeds to another area, picks up an empty trailer, returns to the elevator, signals its readiness to go down, and starts the process all over again. The Barrett Electronics Com-

For motor repairs,

call... HYRE

Complete Electrical
Inspection Service

- Motors
- Maintenance
- Generators
- Wiring
- Repairs
- Installation
- Prompt Service 24 Hours a Day

HYRE ELECTRIC CO.

SINCE 1912

2320 W. Ogden Blvd. • CHesapeake 3-6100

INDUSTRIAL • COMMERCIAL LIGHT AND POWER

NOW! REPAIR
CORRODED CONCRETE
with
NEW
PENNTROWEL
COATINGS

These corrosion-proof trowel coatings from Pennsalt feature economy and long wear. Three grades for all types of service. Call Universal Midwest, Inc., for full information. We are the exclusive agents for Penntrowel and Pennsalt acid-proof mortars, interliners and protective coatings. See us for all your corrosion-proofing needs.

UNIVERSAL MIDWEST, INC.
2133 SO. KEDZIE AVE., CHICAGO 23, ILL.
BIshop 7-1100

Penntrowel is a trade-mark of Pennsalt Chemicals Corp.

BATTEY & CHILDS
ENGINEERS - ARCHITECTS
Complete Service for Industry
231 So. LaSalle St., Chicago 4, Illinois

CODE DATING
Automatic, Dependable, Guaranteed,
Friction and Power-driven Machines
Write giving details on a specific coding problem
KIWI CODERS CORPORATION
4027 N. Kedzie Ave. Chicago 18, Ill.

ORGANIZATIONAL PLANNING
Executive and Sales Personnel
Counseling and Testing
Leroy N. Vernon, Ph.D.
Industrial Psychologist
THE PERSONNEL LABORATORY
La Salle Wacker Bldg. • Chicago

A-Z LETTER SERVICE
ESTABLISHED 1918
PLANOGRAPHING • MULTILITH
ART & COPY LAYOUT
MIMEOGRAPHING • MULTIGRAPHING
ADDRESSING • MAILING
DIRECT MAIL CAMPAIGNS
139 N. CLARK DEarborn 2-1891

METAL NAME PLATES
Etched or Lithographed Plates
with Holes or Adhesive Backs
RELIABLE SERVICE
CHICAGO NAME PLATE CO.
Chicago 26, Ill. AMbassador 2-5264

pany, at Northbrook, Ill., makes such a unit.

The secondary phase of elevator use has led to the introduction of straight pallet or material lifts. These are low-cost units that can be used floor to floor and will handle merchandise only. The pallets or cases are dropped in front of the lift, allowed to roll into it, proceed to their designated floor, and at this point the merchandise will roll out onto another conveyor where it can be picked up by a lift truck and moved to its destination. The Stewart Warner Corporation, Diversey Avenue plant, has some examples of this type of unit.

Overhead monorail conveyors running floor to floor, and in some cases even building to building, have provided the means for moving material in a continuous pattern through the operation where the flow is fixed. It is always in the same direction and the same path, and the volume is substantial. The Butler Manufacturing Company, on Stony Island and Jeffrey Avenue, Chicago, uses this system for carrying all work-in-process from floor to floor.

Straight Chutes

The cheapest form of tying floors together is by means of straight chutes. Simply by cutting a hole in the floor a chute can be made to go from floor to floor. In all these instances, the direction is always down. If both up and down control is needed, a power belt conveyor can be added to the system. There are now belt conveyors with suction surfaces that will allow climbing as steep an incline as 45 degrees, thereby shortening the length of conveyor needed for this purpose. Many companies faced with a conveyor problem have found it practical to put a chute or inclined belt conveyor from the first floor loading dock to the basement, receiving goods in the basement, then bringing them to their upper floors throughout the building during off hours when there is no heavy load on the elevator. This has had a tendency to level out the peaks and valleys of a normal elevator system where receiving is very heavy in the morning, shipping is very heavy in the afternoon, and the elevator is continually tied up.

Still another way of licking the

(Continued on page 37)

Rock Island

ROCK ISLAND IS READY

Speed the day!

Why not contact our Industrial Department for detailed information about plant site availabilities?

• The Rock Island is looking forward to the time when the St. Lawrence Seaway is completed, with large cargo-laden vessels coming into Calumet Harbor and the Port of Chicago.

Speed the day!

In the meantime this railroad continues to carry heavy shipments to, from and through its 14 mid-continent states

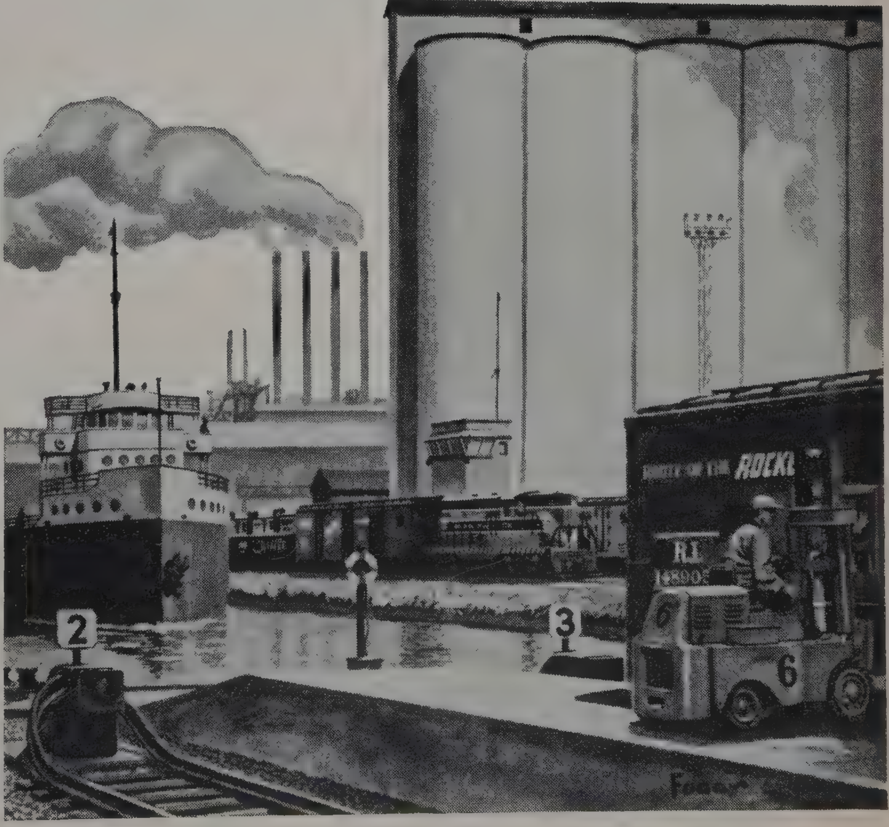
. . . still provides shippers with every modern facility and convenience for a fast, dependable, on-time freight service

. . . still has choice "port sites" to offer far-sighted industrialists in the Calumet Harbor district.

ROCK ISLAND LINES

The Road of Planned Progress...Geared to the Nation's Future

204



Chicago-Overseas Ship Sailings

Continental Port Destinations

Vessel	Line	Date
Ville de Montreal	French	June 11
Johanna	Hamburg American	June 11
Oldenburg	Fjell-Oranje	June 11
Lucie Schulte	Poseidon	June 14
Cleopatra	Hamburg Chicago	June 18
Torsholm	Swedish American	June 18
Rutenfjell	Fjell-Oranje	June 18
Erika Schulte	Poseidon	June 24
Francisca Sartori	Hamburg Chicago	June 25
Veslefjell	Fjell-Oranje	June 25
Carsten Witt	French	June 25
Leanna	North German Lloyd	July 2
Auguste Levers	Fjell-Oranje	July 2
Vaxholm	Swedish American	July 2
Transmichigan	Poseidon	July 7
Prins Frederik Willem	Fjell-Oranje	July 9
Velle de Quebec	French	July 9
Transontario	Poseidon	July 14
Prins Willem George Frederik	Fjell-Oranje	July 16
Erholm	Swedish American	July 16

United Kingdom Destinations

Vessel	Line	Date
Rabat	Fjell-Oranje	June 10
Manchester Vanguard	Manchester Liners Ltd.	June 12
Ragneborg	Swedish Chicago	June 22
Luksefjell	Fjell-Oranje	June 24
Manchester Venture	Manchester Liners Ltd.	June 25
Lissy Schulte	Furness Great Lakes	June 27
Korback	Bristol City	June 28
Lingestroom	Liverpool	June 28
Prins Frederik Hendrik	Fjell-Oranje	July 1
Makefjell	Fjell-Oranje	July 8
Klaus	Liverpool	July 12
Monica Smith	Swedish Chicago	July 12
Prins Willem IV	Fjell-Oranje	July 15
Manchester Prospector	Manchester Liners Ltd.	July 18

Scandinavian and Baltic Destinations

Vessel	Line	Date
Ravnefjell	Fjell	June 10
Torsholm	Swedish American	June 18
Mariefors	Finlake	June 19
Ragneborg	Swedish Chicago	June 22
Ternefjell	Fjell	June 29
Vaxholm	Swedish American	July 3
Skogholm	Swedish American	July 10
Monica Smith	Swedish Chicago	July 12
Helsingfors	Finlake	July 16

Mediterranean Destinations

Vessel	Line	Date
Norderholm	Montship-Capo	June 13
Erna Witt	Ellerman-Fabre	June 16
Scheersberg	Ellerman-Fabre	June 23
Marquette	Ellerman-Fabre	June 29
Heinrich Udo Schulte	Ellerman-Fabre	July 6

Caribbean Destinations

Vessel	Line	Date
Ciandra	Ahlmann-Trans-caribbean	June 24
Colonia	Ahlmann-Trans-caribbean	July 3

Direct Overseas Services

SWEDISH AMERICAN LINE
Great Lakes Ports to Scandinavian and Baltic.

FRENCH LINE/
SWEDISH AMERICAN LINE
Alternate service from Great Lakes ports to the Continent, Bordeaux/Hamburg Range.

MANCHESTER LINERS LTD.
Great Lakes ports to Liverpool and Manchester.

FURNESS GREAT LAKES LINE
Great Lakes ports direct to London.

Furness, Withy & Company, Ltd.
Agents
110 S. Dearborn St.
Chicago 3, Ill.
Phone: CEntral 6-5800 TWX: CG2293

GREAT LAKES OVERSEAS INC.
3400 PRUDENTIAL BLDG.
RAndolph 6-7033
Representing

FJELL-ORANJE lines
LE HAVRE - ROTTERDAM
HAMBURG - BREMEN - LONDON
ANTWERP - GLASGOW

FJELL LINE
OSLO - COPENHAGEN
STAVANGER - BERGEN

SWEDISH CHICAGO LINE
LIVERPOOL - GOTHENBURG
COPENHAGEN

NIAGARA LINE
CASABLANCA - ALGIERS
TUNIS - GENOA - NAPLES
MARSEILLES - BARCELONA
LISBON

Multi-Story Buildings

(Continued from page 35)

elevator problem is a vertical arm conveyor similar to the conveyor used in garages for raising personnel from one floor to another. This vertical arm conveyor makes it possible to take packages from lower to upper floors and from upper floors down without anyone placing them on the conveyor or taking off the goods. When merchandise reaches its designated floor, an arm trips and it rolls off onto gravity roller sections of conveyor. These are especially adaptable for cylindrical objects such as drums and packaged merchandise.

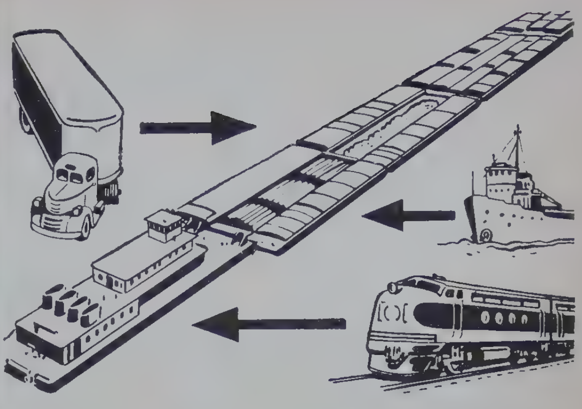
The problem of floor load capacities has diverted many companies from multi-story buildings. To many, floor loads of 125 pounds per square foot and 8 pounds per square not seem to be the deciding factor on the assumption it is impossible to store merchandise or place machinery on floors of this kind. It is best to have some understanding as to how floor loads are computed before abandoning such floors. As listed, floor loads indicate the capacity of the floor at its lowest or weakest point which is usually in the center of an area supported by four columns. The actual floor loads at the column, however, could be as high as 200 pounds per square foot.

Aisle Arrangements

For that reason aisle arrangements should be placed in the center of the floor, and machinery stored or stacked at the post loads. Floor load capacities are greatly improved and, in many instances, doubled by this procedure. The main secret, as far as floor load capacities are concerned, is really based on the condition of the building. If the supporting wood posts have checks in them and are cracked, they can be saved by wrapping steel collars around them. On the other hand, where the floor joists are weakened and pulled away from the wall it is not practical to attempt to increase the loading capacity. A new check should be made, however, to see if the old capacity charts are still accurate.

In many instances floor capacities can be raised by running another row of flooring on the diagonal from the existing floor or by placing

Norman C. Horn



he knows the right combination to cut your shipping costs!

Norman Horn, general agent for Federal Barge Lines in Chicago, is a man who knows his way around the tricky jungle of freight schedules, carriers, commodities, rates, routes.

His job? To cut your shipping costs to the bone. How? By skillfully matching FBL's barge service with other forms of transportation — rail, truck, ship, other barge lines — *in the right combination* to move your shipment efficiently, safely . . . and at lowest possible cost!

Whether your shipments move in bargeload, carload, truckload or LCL . . . whether they're destined for seaports, river ports or inland receivers . . . whether they're in bulk or merchandise freight . . . import-export or domestic . . . Norman can create a schedule that will assure the best service at the lowest cost.

For your next shipment, give Norman Horn a call at WEbster 9-5331.

FBL

FEDERAL BARGE LINES
141 W. Jackson Blvd. Chicago 4, Illinois

Loan Correspondent

STATE MUTUAL LIFE ASSURANCE COMPANY OF AMERICA

THE MIDLAND MUTUAL LIFE INSURANCE COMPANY

•

Loan Representative

THE EQUITABLE LIFE ASSURANCE SOCIETY OF THE UNITED STATES

LAKE MICHIGAN MORTGAGE COMPANY

105 S. LASALLE ST., CHICAGO
PHONE CENTRAL 6-2545

MEMO TO CHICAGO EMPLOYERS:

Do you need ENGINEERS, TECHNICAL OR PROFESSIONAL PEOPLE?

If so, we may be able to help you—*and it won't cost you a cent!*

RIGHT NOW, we have some really excellent applicants in these categories.

Mechanical Engineers . . . Electrical Engineers . . . Civil Engineers . . . Chemical Engineers . . . Marine Engineers . . . Structural Engineers . . . Aeronautical Engineers . . . Welding Engineers . . . Agricultural Engineers . . . Petroleum Engineers . . . Mining Engineers . . .

Architects . . . Architectural Draftsmen . . . Chemists . . . Metallurgists . . . Mechanical Draftsmen . . . Electrical Draftsmen . . . Structural Engineers . . . Construction Superintendents . . . Structural Draftsmen . . .

Laboratory Technicians . . . X-Ray Technicians . . . Medical Technicians . . . Wholesale Salesmen . . . Sales Managers . . .

Comptrollers . . . Accountants . . . Personnel Managers . . . Personnel Assistants . . . Office Managers . . . Credit Managers . . . Collection Managers . . . Purchasing Agents . . . Plant Managers . . . Industrial Engineers . . . Time Study Men . . . Production Planners . . .

Advertising Managers . . . Assistant Advertising Managers . . . Copywriters . . . Artists . . . Photographers . . . Magazine and House Organ Editors . . .

For the most part, these are OUTSTANDING people, with good experience and training . . . Some are relatively recent college grads anxious to get started in their chosen fields.

We also can offer an excellent supply of SUMMER WORKERS. We are now registering thousands of high school and college students and teachers and can refer some excellent applicants for summer openings.

Our PROFESSIONAL, SALES AND CLERICAL OFFICE serves more than 6,000 Chicago employers every year. Our files contain applications from graduates of more than 100 colleges and universities as well as every high school in Chicago.

Remember, whenever you need professional or white collar workers, whether they are accountants, plant managers, copywriters, clerks, salespeople or office boys, the place to call is the

Illinois State Employment Service

PROFESSIONAL, SALES & CLERICAL OFFICE

73 W. Washington St. **FInancial 6-3960**

No Fees Charged Workers or Employers

PHONE SE-8 3500

***.....Every Time for* ALL YOUR ELECTRICAL NEEDS**

EFENGEE ELECTRICAL SUPPLY CO.

39 YEARS OF DEPENDABLE SERVICE—*Wholesalers of Everything Electrical*
965 W. CHICAGO AVE., CHICAGO 22, ILL.

***Waukegan Branch* INTERSTATE ELECTRICAL SUPPLY CO.**
1020 Greenwood, Waukegan, Ill. 'Phone: ONtario 2-1194

steel plates over the central aisl area. This means it is possible t increase the area of pressure that i applied to the floor when a piece o mechanical equipment is run ove it. Poor floors can also be protecte this way. Another protection is b means of masonite sheets on th floor or sheets of transite board se on mastic.

The manufacturers of mechanica handling equipment have develope lift trucks, known as outrigge trucks, which can be run over lo capacity floors and not do any damage. Their design is such that the carry an outrigger which straddle the load and supports it over thre or more points, thereby getting better distribution of load. These sam trucks can be purchased in capacitie from 1,000 pounds up to 10,00 pounds and are known for thei capability of lifting twice thei weight.

As a rule of thumb: gasoline powered, counter-balanced trucks will usually weigh two times their lifting capacity. Electric powered trucks counter-balanced type, will weigh three times their lifting capacity Outrigger trucks will weigh one-hal to two-thirds their lifting capacity.

Another means that can be used to increase floor load capacity is the use of pneumatic tired lift trucks The soft, pneumatic tires go over larger floor area, thereby spreading the weight of the load over more surface.

Speed of Turn-over

Loading and unloading facilities namely the receiving and shipping docks, are only as good as the speed of turn-over at the dock. Good docks decrease the number needed and increase the efficiency of the loading and unloading operations. Therefore, it is always essential that there are at least one or two docks with hydraulic lift platforms that allow direct entry into the highway vehicle with mechanical equipment Lift trucks with 71″ masts and 144″ lifts that will not only go into the highway trailer but can stack to a height of 16 feet are available fo dock work as are dock boards a prices ranging from $47 for an aluminum hand unit all the way up t $1,600 for an installed hydrauli dock, 10,000 pound capacity. Overhead doors should also be designe so that they will permit the ne highway trailers to back up to them and allow removal of unit loads of merchandise. To do this, the opening should be nine feet by nine feet.

Good lighting should also be provided for at the truck dock. This can be done by placing a swivel jointed light socket at least eight feet behind the truck and eight feet up, that will shine directly into the truck.

Old docks with extremely bad slopes should be corrected to the modern standards of the proper depth of 48 inches and at least 26 feet of flat surface before the slope starts. A little money spent in this direction will multiply itself very quickly and make it possible to handle at least four times the turn-over to a dock than would normally be handled with inadequate docks of improper heights, depths and poor back-in facilities. Some companies have gone so far as to build ramps which permit backing up trucks to the second floor of the building. Since truck docks are four feet below level, it is not too difficult to accomplish this.

Old Stairwells

Many of the old buildings find a great loss of space in old stairwells. In many instances these were designed to take care of the capacity crowds of people that normally worked in the buildings. By studying new fire regulations it might be possible to get by with fewer stairwells or possibly make use of outside fire escapes instead. By closing in the unnecessary stairwells, the newly found space can be used for other purposes.

What industries belong in multi-story buildings? Basically, any industries that have a multiplicity of operations and each department is an individual operation all its own; or where warehousing, shipping, and receiving are part of the everyday operation, and gravity can be put to work. This also holds true in buildings where each tenant uses one or more floors and the entire building is tied together so each has access to send merchandise to one central shipping area. Here the central shipping clerk is paid for jointly by each tenant using this service.

In Chicago two companies have done an exceptionally outstanding job of putting an old building to work. One is the Warren Barr Supply Company who moved from the west side to outside the downtown area on north Jefferson street. Warren Barr took over a building formerly used by the Crane Company for plumbing and heating. By means of simple revamping, they have turned it into an efficient operation. The offices that were formerly on the first floor were moved to the second. The first floor area was made into a truck loading dock. Ramps were provided allowing the lift trucks to run into the basement of the main building so this space could be used for storage without the necessity for going into an elevator operation.

Another company that decided location was most important also purchased a multi-story building from a company that moved into the suburbs. This was Hudson Ross which has its stores in the downtown area, and sells such items as appliances and phonographs. Hudson Ross took over the building on Sacramento Boulevard and Harrison Street and converted it into a warehouse and office building, straightened the floors, speeded up the elevators, increased the stacking height by removing balconies, and is now reaping the harvest of having a low-cost appliance warehouse operation. They also put in new truck docks and placed levelers and dockboards into these truck docks to speed up turn-over of vehicles.

Don't give up too easily. It is possible to operate at low cost in multi-story buildings, and in some instances cheaper than in single story.

Advertisers' Index

A

A-Z Letter Service 34

B

Battey & Childs 34
Boynton, A. J., Co. 26
Marsteller, Rickard, Gebhardt & Reed

C

Chicago, Burlington & Quincy Ry. 33
Reincke, Meyer & Finn
Chicago Furnace Supply Co. 26
Vaughan, Thain & Spencer, Inc.
Chicago Name Plate Co. 34
Chicago Rock Island and Pacific Rd. 35
The Caples Co.
Chicago Tribune, The B. C.
Foote, Cone & Belding
Clearing Industrial District 3
Continental Envelope Corp. 9
Elliot, Jaynes & Baruch

D

Damen Savings & Loan Assn. 24
Post Advertising Co.
DeLeuw, Cather & Co. 27
Donnelley, Reuben H., Corp. 31
N. W. Ayer & Son, Inc.
Dorman, F. W., & Co. 26
LeFebvre Adv.

E

Efengee Electrical Supply Co. 38
Elliot, Jaynes & Baruch
Elgin, Joliet & Eastern Ry. 10
Empire Roofing Co. 29

F

Federal Barge Lines, Inc. 37
Batz-Hodgson-Neuwoehner Adv. Agcy.
First National Bank of Chicago 4
Foote, Cone & Belding
Furness, Withy & Company, Ltd. 36

G

Graf, L. J., Construction Co. 31
Graybar Electric Co. 30
Rothbardt & Haas Advertising, Inc.
Great Lakes Overseas, Inc. 36
Gruetzmacher, A. H., & Co. 11
Henry H. Teplitz Adv. Agcy.

H

H W Sandblast Co. 30
Haines Co., The 31
Harrington, J. J., & Co. 29
Hyre Electric Co. 34
George H. Hartman Co.

I

Illinois State Employment Service — Professional, Sales & Clerical Office 38
Inland Steel Co. 1
Edward H. Weiss & Company

K

Kiwi Coders Corp. 34

L

Lake Michigan Mortgage Co. 37
Ladd, Southward & Bentley, Inc.
Lou Steel Products Co. 27

N

North Pier Terminal 23
The Arbogust Co.

O

One LaSalle Street Building 8
Albert Frank-Guenther Law, Inc.

P

Peoples Gas Light & Coke Co. I. F. C.
Needham, Louis & Brorby, Inc.
Personnel Laboratory 34

R

Revere Electric Supply Co. 27
Frederick C. Williams & Associates

S

Standard Oil Company (Indiana) 6
D'Arcy Advertising Co.
Saunders & Co. 28
Turner Advertising Agency
Stock Yard Inn 24
Fred C. Kenline

T

Taft Contracting Co. 29

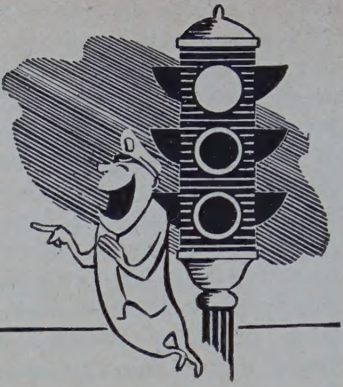
U

United Air Lines, Inc. 2
N. W. Ayer & Son, Inc.
United Electric Coal Companies 32
C. Franklin Brown, Inc.
United States Steel Corp. I. B. C.
Batten, Barton, Durstine & Osborn
Universal-Midwest, Inc. 34
Merchandising Advertisers, Inc.

W

Waldorf Paper Products Co. 25
Scrymiger & Osterholt

Stop me...If...



The secretary, returning from a coffee break, found her boss gazing dumbfounded into the file drawer labeled "T-Z."

"Miss Smith," exclaimed the puzzled man, "where on earth do you keep the Zimmerman correspondence? This file drawer is completely empty!'

"Zimmerman?" asked the secretary. "Let's see, now, is that a company or an individual?"

"What possible difference does that make?" demanded her employer.

"Well, I should say it makes a lot of difference," bristled the girl. "I don't know whether it would be filed under 'D' for 'Dear Sir' or 'G' for 'Gentlemen'."

•

Obviously upset, a young wife called up a friend and told her that she and her husband had quarreled and that he'd left her.

"Now don't worry too much about it," the friend told her soothingly. "He's done that before, you know."

"I know," said the wife, her voice breaking. "But this time he took the bowling ball."

•

Clerk: "No, madam, we haven't had any for quite a long time."

Boss (overhearing): "Oh yes, we have, madam; I will just send to the warehouse and have some brought in for you." (Aside to clerk: "Never refused anything; send out for it."

As the lady went out laughing, the boss demanded of the clerk: "What did she say?"

Clerk: "She said, 'We haven't had rain lately'."

•

Teacher was giving a lecture on charity. "Willie," he said, "if I saw a boy beating a donkey, and stopped him from doing so, what virtue would I be showing?"

Willie (promptly): "Brotherly love."

•

Among the guests at a reception was a distinguished man of letters. He was grave and somewhat taciturn. One of the ladies present suggested to the hostess that he seemed to be out of place at such a party.

"Yes," replied the hostess with a bright smile, "he can't talk anything but sense."

•

It is much better to sit tight than to attempt to drive in that condition.

An American and a Dutchman were talking. "What does your flag look like?" asked the American.

"It has three stripes," replied the Dutchman, "red, white and blue. We say they have a connection with our taxes—we get red when we talk about them, white when we get our tax bills, and we pay them till we're blue in the face."

"That's just how it is here," replied the American, "only we see stars, too."

•

Two Hollywood children were talking as they were walking home from school one day.

"I've got two little brothers and one little sister," boasted one. "How many do you have?"

"I don't have any brothers or sisters," answered the second one, "but I have three papas by my first mama and four mamas by my last papa!"

•

Visitor—"Doctor, what can you say to a girl who is so scary she jumps into the nearest man's arms everytime she's frightened."

Doctor—"Boo!"

A clergyman was spending the afternoon at a house in the English village where he had preached. After tea he was sitting in the garden with his hostess. Out rushed her little boy, holding a rat above his head. "Don't be afraid, mother," he cried, "it's dead. We beat him and bashed him and thumped him until"—and then catching sight of the clergyman, he added, in a lowered voice—"until God called him home."

•

Mother—"Isn't this a rather complicated toy for a small child?"

Toy Salesman—"This, madam, is an educational toy, specially designed to adjust a child to live in the world of today. No matter which way he puts it together, it's wrong."

•

The secretary asked her boss where he had spent his vacation.

"Well," he replied, "a friend of mine invited me up to his hunting lodge—a quiet, secluded place. No night life, no parties, not a woman within a hundred miles."

"Did you enjoy yourself?" she asked.

"Who went?" he snorted.

•

The irate psychiatrist had just about enough arguing with his stubborn patient.

"I'm warning you," he said. "If you don't pay my bill, I'll let you go crazy."

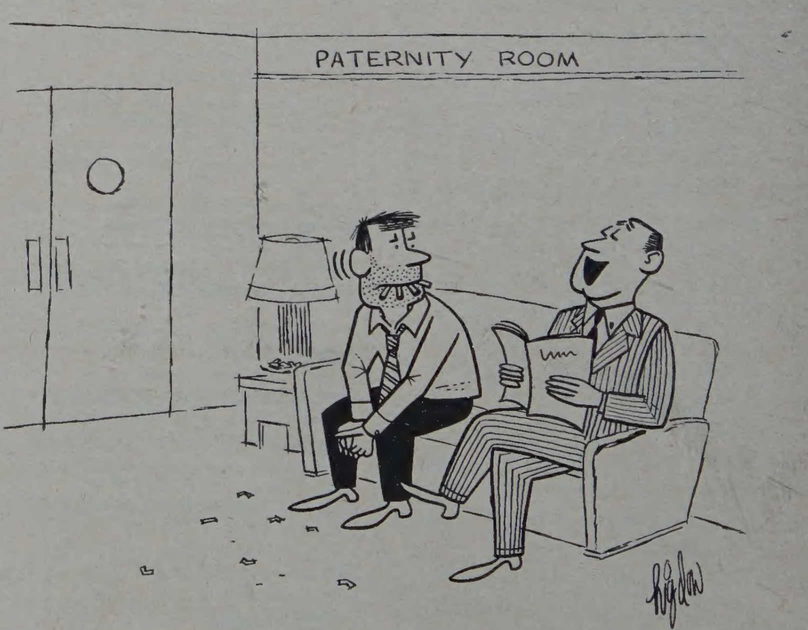
•

"Aren't you ashamed," the judge asked the man, "to have your wife support you by taking in washing?"

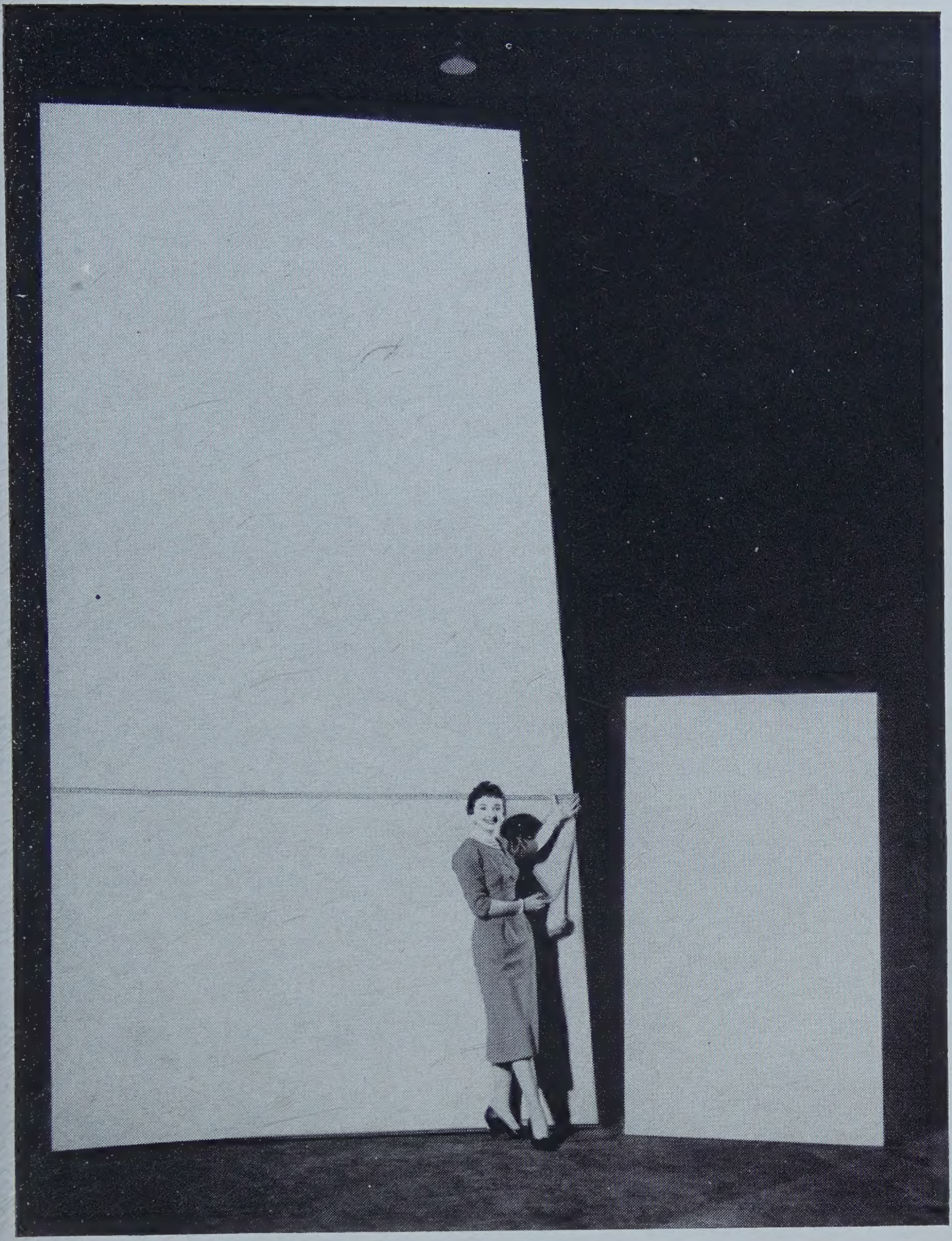
"Yes, I am, Your Honor," he replied. "But what can I do? She's too ignorant to do anything better."

•

An old timer is anybody who remembers when it cost more to operate a car than to park it.



"Of course I'm not nervous, I'm waiting for a date with the nurse."



A year ago this picture would have had to be faked

Until recently, nobody knew how to make thin Stainless Steel sheets as wide as the one you see here. But aircraft manufacturers needed a sheet like this, so United States Steel found a way to do the job. A standard-size sheet of Stainless Steel is inserted between two heavy carbon steel plates and the plates are welded shut around the edges. This steel sandwich is then heated and rolled, widening the Stainless sheet inside. A Stainless sheet as wide as 120 inches can be produced to exceedingly close tolerances with this ingenious method . . . one more way that United States Steel's versatile facilities develop better steels for better products.

USS
TRADEMARK

United States Steel

ARE YOU REPRESENTED IN MRS. CLARK'S CUPBOARD?

In a single month, this Chicagoan stocked her cupboard with 62 different brands of groceries. The Chicago Tribune can name the brands and tell you the exact amount she bought of each.

The Tribune knows because Mrs. Clark is number 1091 in the Chicago Tribune Consumer Panel. And this detailed information is typical of what the Tribune can tell you about metropolitan Chicago's 1,740,000 households—facts that can eliminate a lot of guesswork about how your brand is doing in the Chicago market.

Chicago is a different kind of market—and the Tribune makes it its business to know how and why it is different.

The Chicago Tribune is a different kind of selling force, too. It has more readers. Carries more advertising. And makes more sales in the Chicago market than any other medium.

In Chicago and suburbs, the Tribune reaches as many people as the seven top weekly national magazines combined! More than 6 times as many Chicagoans read the Tribune as turn on the average evening TV show. And 5 out of every 10 advertising dollars spent in Chicago's four newspapers go into the Tribune.

THE TRIBUNE CAN DO ALMOST ANYTHING IN CHICAGO